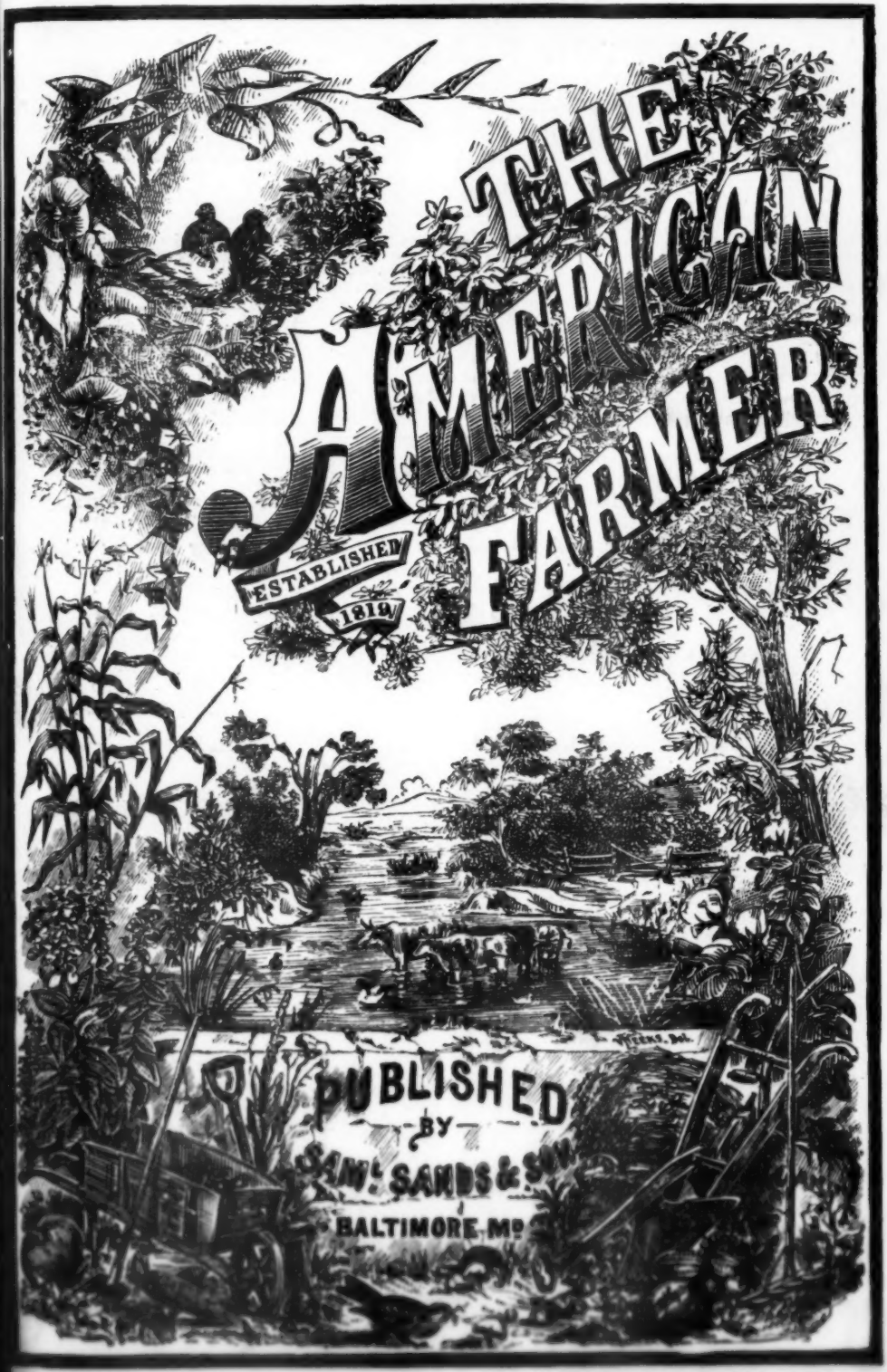
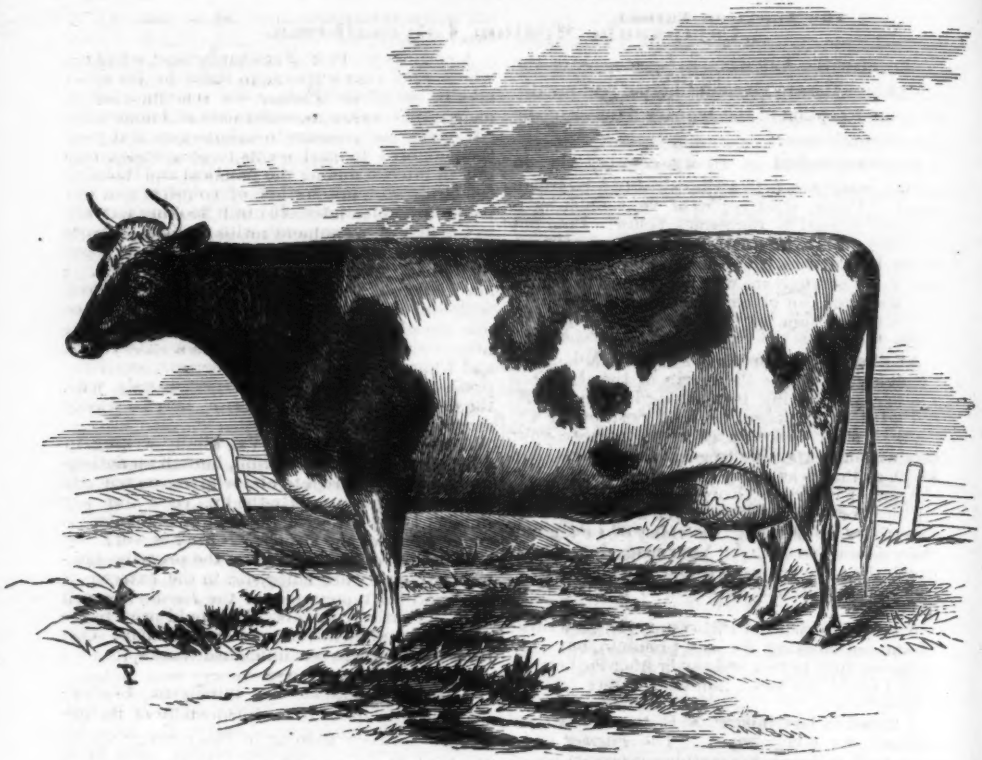
MARCH, 1874.



OFFICE, No. 9 NORTH STREET.



Imported Ayrshire Cow "Model of Perfection."

The Ayrshire Cow.

The cow of which a portrait is given above is the property of Messrs. *Sturtevant Bros.*, South Farmingham, Mass. They made a report concerning her to the *Practical Farmer*, to the effect that she carried off eleven victories in the Scotch show-yards. In 1872 she calved June 19, and in 1873 June 7. In 1872 she gave 6,810 lbs. milk, and the next year, up to December 1st, 5,579 lbs.

One of these gentlemen, in a recent letter to the Boston *Cultivator*, says of the Ayrshires:

"In a few things the Scotch dairy farmers are of one mind, and have been for years: they seek to have animals whose whole energies are devoted to milk manufacture. Experience has informed them that a certain form, characterized by great depth of the hinder parts of the animal, with good width of hips, and without further largeness forward than the internal organs demand for the exercise of their appropriate functions, is indispensable to economic milk production. They have realized, in large measure, this desire. But they have also striven to have upon their animals a particular form of milk vessel, as the Scotch call it—one that shall be of largest capacity, attached in a manner to least annoy the cow in walking or lying down, and is least exposed to the effects of changes of temperature. It is an udder possessed by no other breed with which we are familiar, and is purely Ayrshire.

"Upon the uses of the animal have the shrewd, thrifty Scotch farmers concentrated their efforts. Making less account of color, of size of horn, of the various niceties of fashion—as manifest in the conception of the Jersey fancier—than of the great essentials of profitableness, he has had less success in the small details that fill the eye of the fancier more than of the farmer. But the singleness of purpose with which he has clung to the improvement of the cow as a manufacturer, and his devotion to perfecting the form of the udder—the crowning triumph of his skill—has wrought the largest portion of what uniformity there has been effected in those parts contributing to her uses. It is rare that an obvious want of uniformity in the typical characteristics of the breed does not betray ill-breeding."

PLANTS BY MAIL.—We think we do our readers a service, in calling attention to the advertisement of Messrs. Massey & Hudson, whose offer to send by mail assortments of *Roses* and other flowering plants, puts within the reach of all, however remote from towns, all the beauties of the flower garden. This firm was one of the first to engage in this enterprise, and we believe their business in it is now one of the largest in the country.

Campanula Medium Calycanthema.

Few of our hardy border flowers, says Mr. John Saul, to whom we are indebted for this illustration, are more pleasing, or of more value as garden ornaments, than the old Canterbury Bell, called *Campanula Medium* by botanists—a biennial plant, of pyramidal growth, which inhabits Central Europe, and was introduced to our collections nearly three centuries ago, but which still holds its own; and which, whether we regard the forms with single or double blossoms, purple, blue, rose, or white, of which it gives a rich harvest, stands unrivalled for its beauty.

The ordinary single form bears flowers of the shape of a broad, cleanly-modelled and open bell, and the usual double forms are made up by the crowding into the interior of this bell of certain petaloid outgrowths of the floral whorl, producing a flower on the model of that of a double Petunia. The variety we are now describing, takes quite a different development. In habit the plant resembles the well-known old blue or white Canterbury Bell, "but the corolla is much larger, and the calyx in addition is enlarged to nearly four inches in diameter, presenting the form of a saucer, and changed from its ordinary green color to the same hue as that of the corolla." The broad bell-shaped corolla of the single flower is perfectly formed, but instead of the usual small leafy calyx, this organ becomes much enlarged, and takes on a petaloid character; and it is this which forms the peculiarity of the flower, and adds so much both to its interest and to its beauty.

OUR FLANNELS.—The value of flannel next the skin cannot be overrated. It is invaluable to persons of both sexes, and all ages, in all countries, in all climates, at every season of the year, for the sick and the well—in brief, I cannot conceive of any circumstances in which flannel next the skin is not a comfort and a source of health. It should not be changed from thick to thin before the settled hot weather of the summer, which, in our Northern States, is not much before the middle of June, and often not before the first of July. And the flannels for the summer must not be three-quarters cotton, but they must be all woolen, if you would have the best protection.

In the British army and navy, they make the wearing of flannel a point of discipline. During the hot season the ship's doctor makes a daily examination of the men at unexpected hours, to make sure that they have not left off their flannels.—*Dio Lewis.*

Erianthus Ravennæ.

THIS HARDY and BEAUTIFUL GRASS grows from 8 to 10 feet high, and is thus spoken of by Mr. Jas. Vick, who sends us the cut: The leaves are narrow, four or more feet in length, and partially drooping. The flower stems are abundant, slender and surmounted by beautiful feathery heads, which when dried, make the finest of our strong-growing ornamental Grasses, and though not adapted for boquet work, or the finer ornaments, are certainly unsurpassed for decorative purposes.

The Family Circle.

GOD'S CARE.

BY MRS. MATILDA C. EDWARDS.

I sat in the door at eventide,
My heart was full of fears,
And I saw the landscape before me lie
Through mists of burning tears;
I thought to myself the world is dark,
No light nor joy I see;
Nothing but toil and want is mine,
And no one cares for me.

A sparrow was twittering at my feet,
With its beautiful auburn head,
And it look·d at me with dark, mild eyes,
As it picked up crumbs of bread,
And it said to me, in words as plain
As the words of a bird could be,
"I'm only a sparrow, a worthless bird,
But the dear Lord cares for me."

A lily was growing beside the hedge,
Beautiful, tall and white,
And it shone through the glossy leaves of green
Like an angel clothed in light;
And it said to me, as it waved its head
On the breezes soft and free,
"I'm only a lily, a useless flower,
But the Master cares for me."

Then it seemed that the hand of the loving Lord
Over my head was laid,
And He said to me, "O faithless child,
Wherefore art thou dismayed?
I clothe the lilies, I feed the birds,
I see the sparrows fall,
Nothing escapes my watchful eye—
My kindness is over all."

—*Wood's Magazine.*

The True Woman.

BY ELIZA DUPUY.

The true woman may be dark, brown or fair; plain in feature, or lovely as a dream. It matters not, she always carries with her the power of goodness, and the light that shines through her features is a radiant halo that brightens even into the perfect day to which she looks with unwavering faith and trust. She walks through the world as the Una of existence, contracting no stain from its impurities, though her hand is ever stretched forth to the fallen to enable them to arise once more, and walk before the world in integrity and usefulness. Her daily life is an illustration of all that is gentle and lovable in our imperfect nature. Noble descent, high culture and elegant surroundings, may or may not be hers; but she is true to herself in any and every position. She affects nothing, for she is superior to pretense of every kind, and the utterances of her lips are the truthful exponents of her thoughts. Sincerity, benevolence, and forbearance, are her watchwords, and conscientiously does she abide by their teachings.

The true woman may, and often does have her foibles, but she strives to conquer them, and assimilate to the idea of true womanhood that exists in her mind; her life is a struggle to overcome evil with good, and in a degree she accomplishes it. Those who come within her sphere unconsciously yield to the softening influences she wields over them; the turbulent grow quiet, the morose brighten up, and the saddened heart clings to her as to the stay of existence.

Ah! such women are scattered high and low through all the walks of life, and a blessing and a joy they are to it! Without such strong yet gentle spirits, the world would retrograde on the path of civilization; it is their influence which acts as the conservative principle in the maddening whirl of life, and brings back man to the central point of his existence—his home, and the harmonizing ties that are found there.

As a wife, her price is above rubies, for she brings peace, kindness, and tender lovingness of nature to crown the marriage altar. The orange blossoms of the bride ripen into golden fruitage, and many are the glad hearts that partake of its abundance. Her happiness she freely shares with her friends; her sorrows are sacred to her own heart, and to her heavenly father above does she take them for comfort and renewed hope.

The children God gives to her she neither regards as puppets to be dressed and exhibited, nor as little vessels of wrath to be managed and worried into a morose or dissipated maturity. She knows that if sunshine is necessary to the development of the flowers of the field, cheerfulness is also a necessity to the human blossom; and her children are trained to feel that a "soul at peace with itself" is the only condition of earthly happiness.

Of such a woman it may indeed be said—

"Her children arise and call her blest;
Her husband, and he also praiseth her."

Improved Stock, Implements, &c.

FOR SALE.

The undersigned, intending to sell or rent a large portion of his farm, and to reduce greatly the number of head of stock owned by him, will SELL AT AUCTION, in the course of the Spring of 1874, probably about 1st April, a number of Jersey Herd-Book Bulls, Cows and Heifers, a Devon Bull and several Cows, a thorough-bred Stallion, a Trotting Stallion and a half-bred Percheron Stallion, several Horses, Colts and Mules. Also a lot of Farming Implements, Wagons, Harness, &c., &c.

Catalogues will be published some weeks in advance of the day that shall be appointed for the sale, and will be forwarded to applicants.

J. HOWARD McHENRY,

feb-2t **Pikesville, Baltimore Co., Md.**

ROCKY MOUNTAIN SILVER SPRUCE,

The Most Beautiful Tree in America;

Round Cactus,
Mountain Sunflower,
Painters' Brush,
Pike's Peak Columbine,
AND OTHER
Rocky Mountain Specialties.

For descriptive Catalogue and Price List of Seed, address

LANDIS & FEGAN,
DENVER, COLORADO.

feb *Special Rates to Nurserymen and Dealers.*

Baltimore Markets, Jan. 26.

The quotations below are Wholesale Prices.

Breadstuffs.—*Flour*—Market dull, but prices maintained. Howard St. Super, $5.50@6.25; do. common to fair Extra, $6.50@6.75; do. good to choice do., $7@7.25; do. Family, $7.50@9.50. Ohio and Indiana Super, $5.50@6.25; do. common to fair Extra, $6.50@6.75; do. good to choice do., $7@7.25; do. Family, $7.5 @9; City Mills Super, $6@6.50; do. low to medium Extra, $7@8; do. Rio brands do., $8.75@9. City Fancy brands, $11. Fine Flour, $4.50@5.25. Rye Flour, $4.75@5.25. Corn Meal, City Mills, $4.50; Western, $3.50.

Wheat.—Market quiet and firm. We quote choice white, 195 cts.; fair to prime do., 175@185 cts.; choice amber, 193@196 cts.; good to prime red, 176@180 cts.

Corn.—Dull. Southern white, 78@82 cts.; yellow, 78@81 cts. Western mixed, 83@84 cts.

Rye.—Steady, with sales of prime at 98@100 cts.

Oats.—Dull. Good Southern, 57@60 cts.; Western, 57@9 cts.

Broom Corn.—Demand fair. Common red, 6@7 cts.; good medium green, 8@8¼ cts.; prime hurl, 10@10¼ cts. per lb.

Cotton.—Dull. Sales slow. Prices range about as follows: Good middling, 13¼@14 cts.; strict good ordinary, 14¼@14¾ cts.; low middling, 14¾@15 cts.; middling, 15¾@16 cts.

Dairy Products.—*Butter*—Md. and Pa. rolls, 28@30 cts.; Western rolls, 28@34 cts.; do. tubs, 30@35 cents. *Cheese*—Western, 15@15½; Eastern, 15¼@16 cts.

Hay and Straw. Pa. hay, common to good, $20@22; prime to choice, $23@24. Cecil Co., Md., $24@26. Oat Straw, $14@15. Rye Straw, $16@17.

Live Stock.—*Beef Cattle*—Market dull; receipts good. Best on sale, 6¾@7 cts; generally rated first-class, 4¾@5¾ cts.; medium quality, 4@4¾ cts.; ordinary thin steers, oxen and cows, 3¾@4 cts.

Hogs.—Demand fair and prices maintained. Corn-fed hogs we quote at 7¼@7¾ cts., and still-fed at 7@7¼ cts., net.

Sheep.—Market dull. Fair to good, 4¾@5 cts.; extra, 6½@7 cts., gross. Stock sheep, $2@3 per head.

Molasses.—Muscovado, 21@25 cts.; Porto Rico, 28@55 cts.; New Orleans, 60@75 cts. *Syrups*—Calvert, 62 cts.; Chesapeake, 42@45 cts.; Canton, 25@28 cts. in hhds. and bbls.

Mill Feed.—City Mills Brownstuff, 20@22 cts. per bush.; do. Middlings, 22@26 cts. for light, 45 cts. for heavy.

Onions—$6 per bbl.

Potatoes—Maine Jacksons, at wharf, $1 per bush.; Early Rose, from store, $3.25 a 3 50 per bbl.

Plaster.—$1.75 per bbl, of 320 lbs.

Provisions.—Market firm. Bulk Shoulders, 7¾ cts.; Rib Sides, 8¾ cts.; Clear Rib Sides, 8¾ cts.; Bacon Shoulders, 7¾@8 cts.; Clear Rib Sides, 9¼ cts.; Hams, 12@13 cts.; Mess Pork, $16.50; Lard, 9¾ cts.

Rice.—Active. Carolina, 8¼@8¾ cts.; Rangoon, 7¾ cts.

Salt.—Ground Alum, $1.45@1.55; Fine, $2.35@2.45 per sack; Turks Island, 35@45 cts. per bushel.

Seeds.—Orchard Grass, $1.50 per bush.; Ky. Blue Grass, $2 per bush.; Red Top, $4.50 per bag of 50 lbs.; Timothy, $3.50@3.62 per bush.; Clover, $5.75@6.25 per bush.

Tobacco.—Very quiet. We quote Maryland, frosted, $4@5; sound common, $5@6; good common, $6@9.50; middling, $7@8; good to fine red, $9@12. Virginia, common to good lugs, $5@7; common to medium leaf, $7@8; fair to good leaf, $9@10; selected (shipping), $11@14.

Whiskey.—Dull. $1.02.

Wool.—Market very dull. Washed, 45@48 cts.; unwashed, free from burrs, 25@30 cts.; unwashed, burry, 15@20 cts.

Contents of February No.

Convention of Montgomery Co. Farmers.... 41
Baltimore Co. Gunpowder Club Meeting..... 43
Baltimore Co. Farmers' Union Meeting..... 44
A. B. Davis' Address to Farmers of Md..... 44
On Patrons of Husbandry, by Mr. Langdon. 45
On Southern Agriculture..... 46
Manure for Cotton..... 48
Hudson Corn..... 48
Agricultural Calendar—Work for February; Making Manures and Composts; Sowing Clover, Orchard Grass, and Lucerne Seed; Renovating Pastures; Sowing Oats; Corn Culture; Tobacco Culture; Winter Plowing; Care of Live Stock, Fowls, &c.; Setting Out Orchards; Forming Farmers' Clubs. 49–52
Packing Fruits for Market, by Gen. T. Tilghman..... 52
Planting Trees, &c., by J. W. Kerr..... 52
L. W. G. on Deep Planting Trees..... 53
The Persimmon and Papaw, by J. H. King.. 54
Mass. Hort. Soc. Schedule of Prizes..... 55
The Dairy—Co-operative Dairying, by Mr. Bliss; The Cow, by Mr. Hazard.....56–57
Vegetable Garden—Work for Feb..... 59
Eastern Shore Talk, by Mr. Massey..... 60
The Vineyard, by Dr. J. Fisher, of Mass..... 61
Virginia—Its Products, by Mr. Gilmer..... 62
Book Farming, by J. P. M..... 63
Soiling Crops, by L. H. Cole..... 64
Affairs on the Upper James, by Mr. Holman. 64
Hydrangea Paniculata Grandiflora..... 64
Farming as a Business..... 64
Agricultural Implement Trade of Baltimore. 65
Md. State. Ag. Soc., Proceedings of—Prof. Hallowell on Improvement of Our Soils... 66
Agricultural Societies—Carroll, Frederick, Harford, Washington, and Kent Cos., Md.; Va. State Soc.; Md. State Grange..... 68
Flower Garden, &c., by Mr. Brackenridge... 69
Papers from a Window, by Mrs. J. B. Moore. 70
A Dog and Sheep Law..... 70
Preparation of Tobacco Beds, by R. H. Robinson, of Va..... 71
The Farmer for 1874..... 72
Our Premium List..... 72
Our Correspondents..... 72
Planting Out Peach Trees..... 73
Horticultural Society of Md..... 73
Prices of Grain..... 74
Pennsylvania Fruit Growers' Society..... 74
The American Farmer..... 75
Farming in England and United States..... 75
Ayrshire Cow, Model of Perfection (with cut) 76
Campanula Medium Calycanthema (with cut) 77
Our Flannels..... 77
Erianthus Ravennæ (cut)..... 77
God's Care (poetry)..... 78
The True Woman..... 78
Baltimore Markets..... 79

NEW ADVERTISEMENTS.

Massey & Hudson.—Plants by Mail.
Jas. J. H. Gregory.—Canada Victor Tomato.
Jas. J. H. Gregory.—Fottler's Early Cabbage.
C. L. Oudesluys.—German Potash Salts.
Dufur & Co.—Ornamental Wire Work.
Thos. W. Levering & Sons.—Grass and Clover Seeds.
J. Howard McHenry.—Improved Stock, Implements, &c., for sale.
Landis & Fegan.—Rocky Mountain Floral Specialties.
Smith & Curlett.—Soap and Candle Works.
C. S. & D. B. Frey.—Ground Plaster.
Geo. Page & Co.—Steam Boilers and Engines, and Circular Saw Mills.
Walton, Whann & Co.—Whann's Super-Phosphate.
Dr. R. Schroder.—Grape Vines.
Randolph Peters.—Early Beatrice Peach.
Randolph Peters.—Apple Trees.
American Farmer Office.—Job Printing of all kinds.
W. A. Myers.—Eggs for sale.
Northern Central Railway.—Great Penna. Routes.
Reip & Son.—Tin-ware and House-keeping Articles.
E. D. Hall ck.—Field, Garden and Flower Seeds.
C. W. Burgess & Sons.—Guanos of all kinds.
Jno. S. Reese & Co.—Soluble Pacific Guano.
Geo. Dugdale & Co.—Excellenza Fertilizer.
J. J. Turner & Co.—To Cotton Planters.
J. Bolgiano & Son.—Seeds.

FAIRBANKS' SCALES.—A letter from the United States Commissioner at Vienna announces that the Emperor of Austria has created Thaddeus Fairbanks, of St. Johnsburg, Vt., the inventor of the Fairbank Scales, a Knight of the Imperial Order of "Francis Joseph". This is a rare testimonial to the value of American inventive genius; but when the immense value of a reliable and standard weighing machine to the commerce of the entire civilized world is considered, it is one fully merited.

FINE YOUNG BULLS FOR SALE.

We expect to have for sale in the spring a remarkably fine young AYRSHIRE BULL. Also some fine young JERSEY BULLS. Address

EDITORS AMERICAN FARMER.

Fottler's Early Drumhead.

Farmers and Gardeners, you all need this Cabbage for two reasons: 1st, because it is the earliest of all the drumhead varieties; 2d, because every plant on an acre will make a large and solid head. *Seed of my own growing* sent postpaid by me for 15 cts. per package: 75 cts. per oz. $8.00 per lb. My seed Catalogue *free* to all applicants.

feb-1t JAMES J. H. GREGORY, Marblehead, Mass.

LAND MUST BE CLEARED

To make room for my immense spring planting. The best opportunity ever offered to those who want to plant Apples. I now offer

200,000 No. 1 APPLE TREES,

three years old, six to eight feet high, thrifty stock, all warranted true to name. This stock must be sold as above, to clear the land. I therefore offer it as follows, at one-third the usual retail price:

12 cents each, $10 per hundred, $80 per thousand.

Orders by mail will receive prompt attention.

Catalogues of Apples and other Fruits sent free on application.

RANDOLPH PETERS,

Great Northern and Southern Nurseries,

feb-2t **Wilmington, Del.**

SMITH & CURLETT,

Steam Soap & Candle Works,

PERFUMED CHEMICAL OLIVE SOAPS,

ADAMANTINE and TALLOW CANDLES,

Cor. Holliday and Pleasant Sts.

feb-1y BALTIMORE, MD.

EXTRA EARLY PEAS, MARROWFAT PEAS, BEANS, EARLY EGYPTIAN BEET, KOHL-RABI, EGG PLANT, PEPPER, CAULIFLOWER, LETTUCE, SPINACH and other SEEDS WHOLESALE and RETAIL.

GLADIOLUS, TUBEROSE AND FLOWER SEEDS.

J. BOLCIANO & SON,

28 South Calvert Street, Baltimore, Md.

[feb-1t]

Early Beatrice Peach

RIPENS FULLY TWO WEEKS EARLIER

THAN ANY OTHER KNOWN VARIETIES OF PEACH.

This variety has been well tested in large orchards, and hundreds of bushels of this variety put on our market in 1872 and 1873, and on this, the severest test it could have, it has proved even better than all that has been claimed for it. It is full two weeks earlier than Hale's Early, and free from rot, and the Commission Merchants of Philadelphia and New York not only say it is one of the earliest and best peaches, but one of the best shipping peaches that goes on these markets, and brings more than double the price of any other peach.

I also offer 12 other new and well-tested early and late peaches, which will make the season for shipping some four weeks longer. By planting my new late varieties the canning-house can run from one to two weeks longer.

Price List sent free, with testimonials and description, showing exact rotation in the ripening of all the new and popular kinds from early to late, so that all can plant that they may ship every day from first to last of ripening. Address

RANDOLPH PETERS,

Great Northern and Southern Nurseries,

feb-2t **Wilmington, Del.**

Guano! Guano!

C. W. BURGESS & SON,

166 North Gay Street, Baltimore,

DEALERS IN

MEXICAN AND PERUVIAN GUANO, PHOSPHATES, &c., and

FERTILIZERS OF ALL KINDS.

☞ **Mexican Guano a Specialty,**

Which they offer for sale at the lowest market rates. From the satisfaction expressed as to the quality of the Fertilizers furnished by us, we feel confident that we can give the purchaser the full value of his money. Give us a call before purchasing.

☞ Country Produce bought and sold.

☞ Also, GROCERIES OF ALL KINDS. feb-1y

COTTON PLANTING OF '74.

HORNER'S MARYLAND SUPER-PHOSPHATE,

Prepared especially for COTTON from most concentrated materials.

HORNER'S MARYLAND, for Cotton-growing States, is composed of t' a following ingredients:

Best Peruvian Guano,	750 lbs.	
Bone Dust and Concentrated Animal Matter,	1,100 "	
Muriate of Potash,	150 "	2,000 lbs.

45 628 of Bone Pho phate,
17. Immediately Soluble,
4.50 Ammonia.

Fine and dry and in best Chemical and Mechanical condition of any other Fertilizer made, at home or abroad. EXCELLENT DRILLING ORDER, ETC.

$50 per ton, in bags. JOSHUA HORNER, Jr., Baltimore, Md.

BONE DUST AND BONE MEAL.

From Slaughter-House Bones. 25 years the Standard for Purity and Excellence.

Prof. Tonry and Prof. Wilson render the following analyses of my Bone Dust:

Moisture,		7.52
Organic Matter and Carbonic Acid,		29.94
Lime,	30.47	
Phosphoric Acid,	29 16	
Bone Phosphate of Lime,	59.63	
Insoluble Residue,		2.90
Ammonia,		3.49

WILLIAM P. TONRY, *Analytical Chemist.*

CHEMICAL LABORATORY OF P. B. WILSON,

No. 32 SECOND STREET.

BALTIMORE, JULY 30TH, 1873.

JOSHUA HORNER, JR.

Dear Sir—The following is the result of analysis of a sample of your *Bone Dust*, drawn by myself from a lot of 7 tons lying in your warehouse:

Moisture, (deter. at 212° F.)	3.74	per cent.
Organic Matter,	40.12	"
Containing—Nitrogen 4.08; Ammonia 4.95.		
Inorganic Matter,	56.14	"
Containing Phosphoric Acid,	24.52	per cent.
Containing Bone Phosphate of Lime,	53 52	"
Insoluble Matter,	2.51	"

This is the best sample of BONE DUST I can find in the market, and call your especial attention to the large percentages of valuable material for the improvement of the soil, and to the small percentages of moisture and insoluble matter.

Respectfully, etc.,

P. B. WILSON, *Analytical and Consulting Chemist.*

Prepared for Drilling, and packed in Bags, 167 lbs. each, at $45 per ton.

If, upon the most searching analysis, any admixture or adulteration whatever be found in my Bone Dust, I forfeit the entire price.

My reputation of twenty-five years standing for pure and unexcelled manufactures, precludes the necessity of publishing certificates, besides which, the consumer has to depend upon the character of the manufacturer, rather than upon the merits of any particular issue of Fertilizer, as unprincipled parties may manufacture a good article for the purpose of obtaining Certificates, and the next year fabricate an entirely worthless article.

Respectfully, JOSHUA HORNER, Jr.

54 S. Gay St., Baltimore.

No. 1 Peruvian Guano and Chemicals for Fertilizing purposes constantly on hand. jan1-1y

THE

AMERICAN FARMER.

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . . *Virg.*

PUBLISHED BY SAML. SANDS & SON, BALTIMORE, MD.

VOL. III.—NO. 3.] MARCH, 1874. [NEW SERIES.

Fish Culture in Maryland.

We are much gratified that there is a prospect of some action by the Legislature of this State looking towards a recognition of the importance of re-stocking our waters with edible fish. A bill has been introduced by Mr. Lloyd, of Talbot Co., providing for the appointment of Commissioners of Fisheries, and appropriating funds to meet the expenses of performing the duties assigned to them. This interest is one hardly likely to be overrated. It is also one becoming appreciated everywhere. Our neighboring State of Pennsylvania has gone energetically to work in this matter, and the success attending the exertions of her Fish Commissioners has been marked and gratifying. The same may be said of the States of New York, Massachusetts and Connecticut, and, as we believe, of New Jersey. None of these States have greater fields for the operation of well-devised and well-executed laws than our own. Although the yield in many cases is much reduced, we believe our water-courses are only in a few cases depopulated entirely of their finny denizens. The diminution, however, will soon be seriously felt, and it is only prudence to provide against the evil day before it is really upon us. The rapid increase in our population, especially in our towns and cities, makes any movement resulting in increasing the supply of nourishing and palatable food a step of wise public policy. To repair damages already incurred, to prevent the further waste always liable to be encountered, and to increase the present supply of our fisheries by the protection of old species and the introduction of new ones, whose habits adapt them to our waters, will be an act of timely and provident legislation.

Fish culture, it is conceded, is no longer a mere experiment. As a business of itself, its success in skilled hands is undoubted. As a means of restoring to our streams the myriads of inhabitants they are capable of supporting, the artificial propagation of fish is a first necessity,—any other process being too slow and entirely uncertain. Its dimensions may be said, indeed, to have attained national importance, and its fortunate results may be seen in the re-stocking of some of our large rivers with fish which had almost become extinct.

The Fish Commissioners of New York, in their report for 1873, say that after five years' experience they have reached the conclusion that fish can be raised with less cost and trouble than any other articles of food; and that while it may be true that a pound of fish does not contain as much nourishment as a pound of beef, the difference is by no means as great as the difference in the cost of production, and that for some purposes of health it is much more valuable than a like weight of other food, while it needs less care and labor to raise fish than it does to raise other animals, or even to raise vegetables. These same officials say that they find from experience that it is best, as a rule, to put varieties of fish into the same waters, as to utilize all the food in the water there must be fish with different organizations; and they express their confidence that in a short time the people of this country will rely upon re-stocking our waters, and not upon game laws, to keep up a full supply of fish for our markets, as it is now seen that if the principles we apply to the kindred subject of agriculture are used in this branch of food production, we shall soon have abundant and valuable returns.

We have for several years past felt a deep interest upon this subject, and from time to time, in our own and in other papers, have called public attention to its importance; and we now begin to realize our hope, that an earnest effort will be

made in the right direction to secure success to the suggestions which we have so persistently urged.

It will be of interest to the readers of the *American Farmer* to know of the successful establishment of at least one fish farm in our State. We recently paid a visit to the ponds of Mr. Alexander Kent, situated at Green Spring Station, on the Western Maryland Railroad, some ten miles from Baltimore. Operations were begun here in the spring of last year, and early in the following October the stock fish were placed in the ponds. These fish are brook trout, to which species it is intended at first mainly to limit the operations, although there are some salmon trout now being reared. Mr. Kent placed in his ponds 7,000 adult trout, almost all of which were caught with the hook in the Blackwater branch of the Cheat river. Owing to delays in transportation, they failed to reach their destination until late in the season, so late that many of the fish had spawned in the tanks in which they were transported, the loss of eggs being in this way very large. About 30,000 fry were successfully hatched, however, most of which have reached the age of two months, and are now thriving and healthy.

The situation Mr. Kent selected for his hatching-house and ponds is a very favorable one—probably the most advantageously located in the vicinity of this city. There are several springs available, one of great capacity, the well-known Green Spring, furnishing about 1,200 gallons of water a minute, and of a temperature well adapted for the use to which it is now being put.

The hatching-house is a neat building of about 30x40 feet, and, from the fortunate location of the head of the spring furnishing the water, is so arranged that all the hatching troughs are elevated to a height permitting observation and the necessary operations without any stooping, as is often necessary in inspection or needful manipulations. Besides the stock ponds, of which there are now two series, there are several smaller ones, known as "nurseries," in which the young fry are kept until they are large enough to be transferred to the pond in which the matured fish are kept. It is a part of the plan to add to the number of ponds as the demand for space increases.

There is little mystery in fish culture after the principles are understood and practice acquired. The impregnated spawn, or eggs, are carefully spread over a bed of clean gravel in a trough, through which the cold spring water is continually passing. In the course of from 30 to 180 days, according to the temperature of the water—the colder it is the longer the time necessary for hatching—the fry or young fish make their appearance. During the first six weeks of their lives they eat nothing; after that they require constant attention, the critical age being that between six weeks and three months. The fry when hatched have under them a sac, somewhat globular in shape, which does not wholly disappear for about six weeks, and which, during that period, entirely furnishes them with nutriment. After its disappearance they are fed on finely chopped liver, which is passed through a close sieve to separate the particles for the little fish. These, at the age of two or three months, are transferred to nursery ponds, but not placed with the older and larger fish, by whom they would soon be devoured. As soon, however, as they are of a size to take care of themselves, they are transferred to the stock ponds, where, regularly and carefully fed, they increase in size very rapidly.

Mr. Kent is sanguine of his success in this enterprise, but has not that enthusiasm which overlooks obstacles and disdains the teachings which often come only from failures. He believes that a steady and remunerative demand will arise for fish artificially reared, and he believes also in the ability of every farmer, possessing on his farm a spring of proper volume and temperature, to raise, with little trouble or expense, trout for the supply of his own table. Taking a wider view of the whole subject, he believes in the adaptability of our streams for great numbers of fish, and is anxious that these great advantages should be availed of. In this we heartily agree with him.

The American Fish Culture Association.

Since the above was in type we have been favored by a correspondent with a report of the proceedings of the annual meeting of the above society, held in New York city on February 10th. The meeting was the largest ever held, attended by successful and enthusiastic fish culturists from all parts of the country. The President, Hon. R. B. Roosevelt, delivered an address, showing the satisfactory and even unhoped for results attained in Fish Culture. A number of interesting papers were read, including one from Prof. Baird, U. S. Commissioner of Fisheries, and one from Seth Green, the latter of whom showed that it was entirely practicable for gentlemen possessing small trout streams to stock them so abundantly in three years, that better sport can be had than is now often afforded by three hundred miles travel. We regret our crowded pages prevent our giving the full report of this meeting.

Horticulture.

Pennsylvania Fruit-Growers' Convention.

The annual meeting of this society was held, as heretofore mentioned in the *Farmer*, in Mechanicsburg, Pa., on the 21st and 22d Jany. The attendance was large and the proceedings interesting, and we give the following notes made of them by one of the editors of *The American Farmer*, who was present:

Mr. Josiah Hoopes, the President, delivered his annual address upon the opening of the meeting. He said for three successive summers, seasons of extreme dryness have been followed by excessive rains; but last year, in Penna., the *Grape* crop, for many years a failure, yielded bountifully. Old Isabellas and Dianas even yielded fine large bunches, while Concord, Ives, and Hartford Prolific, produced enormous crops.

Pears were reasonably fair, but the foliage ripened and fell prematurely. *Apples* were few and generally in advance of their proper season.

Peaches were a total failure in Eastern Penna., from the unprecedented low temperature of the preceding winter,—in many cases not only the buds but the trees themselves being destroyed.

All *small fruits* were scarce from the early drought, but the advantage in mulching *strawberries* was decidedly shown.

In planting *peaches* he recommended an adherence to those varieties which succeeded best in the respective localities; *late* varieties were those most needed,—Crawford's Late being one which for East Penna., was always and everywhere profitable. Salway has not proved what was anticipated, but some of the Rivers seedlings may excel in what it lacks, as may also one of the new French peaches which ripens some days after the Salway. *Apples* have always been considered the staple fruit crop of his State, but growers will now be apt to disclaim this, owing to the depredations of insects lessening the yield. The speaker recommended always the planting of kinds known to succeed in each neighborhood.

Pears will pay, as shown by the orchards of Mr. Satterthwaite, of Montgomery; but they require care in cultivation and in marketing the fruit. *Plums* do not pay and probably cannot be made successful in sandy soil. *Quinces*, of all fruits, need the greatest care against the borer. If planted in suitable soils and annually enriched they will succeed. Of *Cherries*, Mr. H. recommended the Early Richmond and English Morello; the dessert varieties being uncertain, while these seldom fail. As to *Strawberries*, much controversy exists as to their profit, but men like Knox and Satterthwaite say *yes*. The truth is, the market cannot be overstocked with *first-class* fruit. If shippers will always put the best in one crate and the second best in another, it will always be found that the good fruit commands a good price and finds ready sale. Of varieties nothing yet found supersedes the Wilson's Albany. Of *Raspberries* he commended the Mammoth Cluster, and for home gardens the Herstine and Saunders leave little to be desired, nor does the Brandywine for shipping. The *Gooseberry* is not much improved. It is hardy, but lacks quality and size. The American Seedling is still about the best.

Of *Blackberries* the Kittatinny is good, but we must have the lusciousness of the *Dewberry*, on an upright stem, while the latter ought to be increased in size.

The President then made an appeal in behalf of *ornamental planting* about the farm-house, protesting against the tendency to fall into habits of indifference as to all but supplies of daily food; while this has its use and pecuniary value, grounds laid out in modern style add to the value of the farm, and every rose, every shrub and every evergreen planted foster a love of home and a taste for the beautiful. He hoped the day was about departing when it could be longer said that Penna. farmers actually gave better quarters to their stock than they did to their families; when their barns were large, roomy and comfortable, and their houses small, barren and forlorn.

Mr. Hoopes then indicated his intention of declining a re-election as President of the Society, an office he had held five years; and, at the election, Prof. S. B. Heiges, of York, was elected President of the Society.

From our report we omit the report of the General Fruit Committee, its statements and suggestions naturally being unsuited for the districts into which the *Farmer* mainly goes.

Mr. Paschall Morris then read a paper on

The Soils best adapted to the various Fruits, with suggestions for counteracting evils resulting from those of an uncongenial character.

He said no soils were absolutely uncongenial, save those impregnated with salts of iron. The conditions of exposure, thermometrical influence, liability to blight, &c., have more influence than soils. Some of the means of avoiding these conditions, when unfavorable, were suggested in the wrapping of the stems of trees with straw, growing low branching trees, refraining from high cultivation of orchards, mulching, and the planting of shelter belts of evergreens. The use of potash was also noticed as a beneficial application for fruit trees in the place of stimulating barn-yard manures. These means, with deep preparation of the soil, providing for its æration, would remedy the unfavorable circumstances of most soils.

Mr. Meehan, of the *Gardener's Monthly*, concurred; the nature of the soil was of secondary consideration. Any soils will grow fruit if they are given proper cultivation, and shallow planting is adopted. Deep planting is admissable in light soils, and mulching keeps the roots near the surface of the ground, and this constitutes its value,—the roots then getting the advantage of every rain.

Mr. Engle gave, as a reverse to this, an instance of great success in orchards the trees of which were planted in absolutely "post holes," but which thrived and gave crops, while those around failed utterly.

Prof. Heiges endorsed the value of mulching, but gave a caution against the use of unfermented manure. He had ruined his grapes and pears by this use of it. The fermentation developes spores of fungoids which are certain to attack the plant

and carry to it disease and death. If applied in the fall there is no danger, the winter's freezing destroying these germs. As to protection from unfavorable exposures, he cited the instance of an orchard which had not failed for fifteen years,—it being on a mountain side protected from the north and on a friable rock which secured perfect drainage. Orchards on soils formed from rocks of volcanic origin have always been successful.

Mr. Martin had used a good deal of unfermented manure, using it in the fall with good results. In spring had known it to kill the trees in 48 hours.

The President thought all green crops injudicious for mulching. In their decomposition all kinds of fungi start into active life, attach themselves to the roots, go up into the circulation of the tree and destroy its life. He said Charles Downing had tried these and found them always deleterious. Nests of insects are found in this kind of material, and their eggs are hatched by the warmth of the decomposition. The President thought the preference of fruits for various soils might be stated thus: *Peaches* do best on light soils; *Pears* on heavy; *Cherries* in moderately stiff ones.

Mr. Engle said the cherry will flourish wherever the peach will, and both these do well wherever the chestnut flourishes. The *Vine* does well on most soils, best in sandy loams; pears and plums require heavy soils; apples flourish in a wide variety of soil.

Prof. Heiges planted peaches in the hardest kind of clay impregnated with iron; the land was elevated but the situation was flat. Planted shallow in a furrow. He has trees 3½ inches diameter which will be three years planted next April. The soil is so tough he cannot plow even five inches deep.

Mr. Cummings knew a fine peach orchard on stiff lime-stone clay which was doing finely, while on low ground only 100 yards off no peaches can be raised at all.

Mr. Pennypacker had an orchard in cold, wet, stiff land, from which it cost him $150 an acre to remove the stones. Laid open to frost, the land became friable. He applies half a bushel unleached tan-ashes to each tree every fall. Trees four years planted are 3½ inches in diameter.

Mr. Merceron has trees which are now covered 8 to 10 inches deeper than they were when planted, and they are the best he has.

Mr. Wm. Saunders, Superintendent Grounds and Gardens Department of Agriculture, knew of an instance where the gradual filling up had not injured trees covered 8 to 10 feet; but they had been covered only about two inches a year and the roots came gradually to the surface. The physical conditions as to relation of air and water, are to be considered, rather than the chemical constitution of soils. He opposed chemical analysis of soils for orchards as a thing out of date, impracticable and uncertain. As a mulch he thought *tan* very dangerous, knowing of instances of great injury done by it. *Dry* substances are safe,—either grass or unfermented manure.

Speaking of the varieties of soils in which fruits do well, he instanced a vineyard near Cleveland, O., on a light drifting sand, and another not far off on the stiffest clay, and both of which gave the finest grapes in that vicinity.

Mr. Martin gave his experience in growing fruit trees on wet soils. The trees grew finely, but they never bore fruit of any value.

Mr. Meehan said fruit can be grown to at least moderate perfection in any soil in Penna. The conditions of success are that air must have access to the roots and water must pass rapidly away. This is the solution of all the mystery about fruit-growing.

Is there anything new in the GRAPE question as to cause and remedies for our repeated failures?

Prest. Calder, of the Pa. Agricultural College, thought not. He laid great stress on importance of selecting varieties suited to soil and exposure where planted. Any ground that will grow corn will grow grapes. Thought there was too much pruning; advocated constant stirring of the soil and thinning out the fruit.

Mr. Meehan thought M. Planchon, in his visit, had shown the real trouble with the grape, and can confirm the statements on which his report to the French Government is based, as to the origin of the trouble being found in the presence of the *Phylloxera*. The reason why the Concord and other hardy kinds are comparatively free is that their roots are more fibrous; the rootlets form so fast they cannot all be eaten by the insects. When the soil is loose there are more of these pests than when the soil is hard and close. Foreign grapes do not have fibrous roots, and this is why they are so soon injured by the Phylloxera. Mr. M. is satisfied that in grape-growing trenching is unnecessary; he planted a dozen Concord and Clintons in soils where holes had to be dug out with a pick, and which were filled in with rotten manure, stones, &c. These vines give a bushel of fruit a year, and from them he has sent 10,000 eyes to France.

Mr. Saunders was astonished that M. Planchon should have said the *Phylloxera* was the cause of our failure to grow foreign grapes. The mildew is the real trouble. In our graperies we grow foreign grapes with the roots outside, and of course exposed to attack from this insect.

Prof. Heiges said he had such an abundance of grapes the last season he had to prop up the wires of his trellis. He gives his vines perfect liberty; while he was formerly a close disciple of Fuller's Renewal System, he now does not prune at all. He has now, as a consequence, instead of plenty of immature wood, full crops of grapes. Last season, in his neighborhood, no vines closely pruned had any grapes. He sometimes cuts out a cane if there is too much wood, and that is all. With him none of the Rogers hybrids, nor Croton, Iona, Eumelan, nor any grape with any foreign cross, was of any account. Hartford Prolific, and Concord, and Clinton for wine, were successful, and he stuck to them, as he wanted plenty of fruit, and could get it only from them.

Mr. Engle, on the contrary, grows grapes very successfully on Fuller's plan.

Is it desirable to devote our best farm lands to the cultivation of Fruit?

Mr. Bantram and Mr. Satterthwaite thought near a market the best lands had better be taken for fruits, especially for small fruits.

Mr. Saunders said he had been for years ad-

vising the farmers of Va. and N. C. to plant fruit trees on lands worn out by grain and tobacco.

Mr. Meehan would answer this question as a fruit-grower, *yes*; as a farmer, *no*. Many tracts of land bearing nothing but briers and stones could be made to bring good crops of fruits by top-dressing, &c. Farmers should make fruit-growing a secondary consideration, where a good market is convenient for ordinary farm crops.

Mr. Saunders has bought 100 acres of land in Md.; has put no manure on it, but has a fine orchard of pears on it, which last summer yielded Beurre Clairgeau pears, the largest of which weighed 22 and the smallest 14 ounces.

Mr. Martin had planted an orchard on very poor soil. His Clairgeaus weighed from 19 to 22 ounces, and are still doing well, though not so well as at first. This land, which cost him from $31 to $42 per acre, produces as much fruit as that which cost three or four times as much, and produces much more grain.

Dwarf Fruit Trees, and Pruning.

On the first of these topics Mr. Martin read an essay commending dwarfs as desirable from the better quality of their fruit, their early bearing, the readiness with which they may be raised, and the small amount of space they occupy. They were considered to be the thing for tenant cultivators, as they can readily and safely be removed, if kept root-pruned, and will bear a moderate crop the same year they are moved. The tendency of dwarfs to overbear must be checked, however, or they will be short lived.

Regarding pruning, Mr. Engle took the ground that if we attended to pinching properly during the growing season very little pruning is needed.

Can Fruit Culture be made profitable in connection with the timber question?

Mr. Meehan considered this question in several lights. Cherry trees, he said, make almost as much in timber as in fruit. The wood stands next to mahogany in value, and he saw no reason why the trees should not be grown as much for the timber as for the fruit they will produce. There is also a considerable demand for pear wood, and apple wood is also valuable, he having known of $25 being paid for one trunk,—the demand for this wood coming from last makers.

On the question of shelter belts for orchards, Mr. M. said some persons recommended Norway Spruce. The Larch is a rapid grower, a good wind-break, and is one of the best to be employed. The timber is valuable and the trees can be planted very young, and early thinned out. The thinnings answer for nursery purposes. At first they will do for poles; afterwards, as they grow larger, for rails and posts. The Locust is a desirable tree, from the circumstance of not seeming to rob the soil as much as other kinds. No insects attack it. The White Pine is another good tree. He thought fruit trees and timber trees could be grown together very successfully, and the subject was deserving of more attention than it was receiving in this connection.

Mr. Meehan is no believer in the modification of climate by tree-planting or cutting, but the increase of forests is demanded by the ever-increasing scarcity of timber. The English Oaks grow rapidly, notwithstanding the general belief to the contrary. In four years from the acorn, saplings will be large enough for hoop poles, for which a constant market exists, and frequent thinnings will in a few years make them large enough for considerable returns. The value of walnut stumps was incidentally alluded to,—some of these, of finely curled grain, bringing $100 a piece.

The question of the European Larch not being a durable wood being mooted, Mr. Meehan said there was a great difference of opinion about that, and that it might be according to the health of the trees.

Organic or inorganic manures, which are best for the growth of fruit trees?

Prof. S. B. Heiges read an able paper on this question. Had made a number of interesting experiments, and had found great, perhaps the greatest, success from the use of ashes on grapes and pears. Experience had led him to believe that for producing wood growth, decomposed vegetable matter was suitable; for fruits, inorganic materials—phosphates, potash, &c. Coal ashes are practically devoid of any useful salt, but acting mechanically they keep the soil porous, and may in that way prove highly advantageous to stiff land.

Destructive Insects and Methods of Extermination.

Mr. A. S. Fuller, of N. J., said next spring will find the whole Eastern country overrun, as the West has already been, with the *Colorado Potato Beetle*. The cheapest remedy is still Paris green in proportion of one part to twenty of plaster or flour, and the mixture sprinkled over the vines. It is death to both larvæ and perfect insects, but it must be used, to be entirely successful, as soon as the larvæ or worms first show themselves.

Of the *cabbage worms*, it is hoped the White Butterfly will soon be wiped out by a parasite which has now reached this country, but no artificial remedy for it exists. The Harlequin cabbage bug has progressed from Texas, and attacks not only cabbage but all plants of the brassica family. There are several broods each year, and it hibernates in winter; no parasites yet discovered.

Insects injurious in the orchard, were discussed and suggestions offered for their destruction. Borers should be taken from the collars of the trees in the fall; the *Codling moth* is lessened in numbers by traps, and by destroying all windfalls; any soft sticky substance put around the trees will prevent the female *Canker worm* ascending the trunk to lay her eggs; and the *Tent Caterpillar* must be gathered by hand.

The *red weevil* infesting barns and granaries is a pest hard to get rid of, the only mode being to remove all the grain and fumigate with sulphur. The true grain weevil of Europe is worse than this, but heat will kill all.

Mr. Meehan thought whitewashing trees was one of the best things a farmer could do, as it not only kills the insects and eggs, but renovates the bark. Put in soot and the color will be less objectionable than glaring white.

Asparagus Culture.

A paper was read from Jno. S. Collins, of N. J., who said congenial soil, good cultivation and ample manuring were more than varieties. He plants rows 4 feet apart and 1 foot in the rows. Manures heavily with stable manure and salt at end of each cutting season. Runs a road scraper

over the beds in the fall, and again in spring. Yield does not get to its best for nine years. From his beds he got 3,448 bunches per acre. Cautions persons not to plant too deep, not over 6 inches.

Mr. Satterthwaite would not plant less than one foot deep in any soil; thinks heretofore he has planted too shallow.

An interesting discussion on trees for Ornamental Planting we pass over here for want of space. We may hereafter come back to the subject.

What new Fruits recently introduced appear worthy of dissemination.

Mr. Satterthwaite said there were very few he could recommend. [Mr. S. is a large and successful fruit-grower of Montgomery Co., Pa., not far from Philadelphia, and appears to be regarded as an authority in all things pertaining to fruits in that section of the State.] He does recommend, among *Strawberries*, Boyden's No. 30—it is the best keeping berry he knows, a splendid grower, and produces well. Thinks the Monarch of the West will prove an acquisition; it is a fine grower and yielder. Kentucky is a good late one, a fine bearer, one of the few he keeps. The President Wilder is a complete failure. For him nothing equals the Jucunda. Mr. Knox had said it would pay ten times better than any other kind. His experience now almost leads him to concur with that statement; with him the Wilson's Albany is worthless.

Of *Raspberries*, Herstine seems almost perfection. Bears enormous crops, is hardy, but not adapted for market. Every one who has a garden should have it. The Brandywine is very valuable for market, supplanting all others in the Philadelphia market, and is the best keeping one he knows. It suckers too much, and these must be kept down. Considers the Philadelphia superseded by these. The Brandywine for shipping; the Herstine for family use. *Pears*,—could not say much about new pears. It took too long to try fully the merits of a pear. For his situation he would confine himself to six varieties: Seckel, Bartlett, Lawrence, Duchesse d'Angouleme, Beurre d'Anjou, Rutter.

Mr. Meehan commended the Rocky Mountain or Utah Currant, and thought it a little strange it did not become popular. It is quite equal to our common gooseberry; its color varies from brilliant pink to nearly black. With proper cultivation they would be an acquisition. They make a fine preserve. Mr. Saunders agreed with Mr. Meehan about them, but said the Department of Agriculture had distributed a good many, and they were not well received.

Mr. Fuller saw it twenty years ago, and has always thought it strange we have not started from the wild, and built up a finer currant than those we get from Europe. Thinks we could get currants an inch in diameter.

As to strawberries, his experience in New Jersey was just the reverse of Mr. Satterthwaite's. The Jucunda has not borne a bushel to the acre, while Wilson's Albany surpasses all others. He does not raise strawberries for sale, but from his family garden he sold last season to neighbors, from 8 rows 100 feet long of Wilson's, $56 worth of fruit. With him the best kinds are Charles Downing, Wilson's Albany and Green Prolific.

Pear Blight.

Mr. Satterthwaite avoided this by planting varieties not liable to blight. With him cultivation or non-cultivation, fertilizing or non-fertilizing, made no difference. Of pears blighting seriously he named Vicar of Winkfield, Glout Morceau, Madelaine, Doyenne d'Ete, Osband's, Summer, Belle Lucrative and Bartlett. Never knew the Seckel or Duchesse to blight.

Mr. Meehan said no kind of cultivation makes any difference in blighting,—not even, as some thought, keeping trees in grass. Blighting is dependent on localities. In some parts of the West the Vicar never blights; at Rochester, the Seckel blights badly. There is no doubt the blight is caused by parasitic fungi floating in the air, which attach themselves to the bark and vegetate there; as soon as the bark is entirely surrounded the circulation of the sap is interrupted and the limb dies. There is no cure for it, so far as known.

Mr. Saunders knew of no varieties exempt, though he cannot remember ever seeing Duchesse or Tyson blight.

At the closing of the session Mr. Saunders complimented the Society on the work it was effecting, a work he said that was being better done than that of the American Pomological Society.

President Hoopes delivered a short farewell address, and the Convention adjourned to meet in January, 1875, at York, Pa.

New Fruits.

To the Editors of the American Farmer:

The rapidity with which "new varieties" of fruits multiply in this progressive stage of fruit-growing, is such as to produce not a little trouble (expense not noted) amongst that energetic class of growers who strive to keep pace with improvements. To bring out, and develope to its highest standard of excellence, each and every class of fruit, seems now to be the aim and watchword of every American fruit-grower. "To be or not to be" a horticultural benefactor, is ostensibly "the question." That much good has already resulted and is still accruing from this spirit, all interested will agree, notwithstanding the frequent thorns amongst the flowers, so keenly illustrated by misrepresentation of the merits of novelties. Dissatisfied with the productions of our own country, the *live* horticulturists of America turn their appreciative eyes eastward, and (figuratively) penetrate the gardens of older countries, and in true Yankee style cull therefrom a share of their richest gems. From the productions of Russia we have the Tetofsky Apple, the trees of which seem equally as hardy and productive in the North as the well-known Red Astrachan from Sweden; and should it succeed as well in Maryland, as the latter, will be quite a valuable acquisition to the list of early summer apples.

More recently we have the three early peaches from England—Beatrice, Louise, and Rivers,—the *promises* of which it is quite unnecessary to speak of here. But while thinking of peaches I am reminded of one of the thorns alluded to above. Amongst our own productions, not long since, there was advertised a peach represented as

ripening three whole weeks before the Hale's Early. That thorn was well managed, as a great many were pricked by it; the variety need not be named here. Still more recently Alexander's Early of the West "turns up" and lays strong claims to extreme earliness, (*ten days* earlier than Hale's.) There is but little said about this variety in Eastern journals, and the fact of an extremely early peach being of American origin, will tend to make those orchardists who are acquainted with the influences of the "Yellows" in that direction, somewhat cautious about taking hold of it. In late varieties this danger does not exist to the same extent, and what a wholesale number of valuable late varieties is just at this time being advertised, apparently each excelling the others in some particular quality, in the scale of market esteem!

A very few years back the Old English or Heath Cling was the latest peach of value to market growers; not so now, for at the present there are a dozen or more kinds, *freestones*, ripening after the Heath Cling, from one to three weeks; and as a "top-sheaf" to the grand total, we have Sherman's October, which is of good quality, later than all, *keeps in good condition two or three weeks after picking, and ships to Europe.*

But I have written enough. Thought when I started would reach the small fruits, but as I do not like to be worried with "too long articles" myself, I am reminded thereby of the "golden rule." May revert to this subject again, some other *bad* day. [Do! *Eds.*] Very truly yours,

Denton, Md. J. W. KERR.

Peach Trees—Deep Planting Again.

To the Editors of the American Farmer:

Our venerable and respected friend, L. W. G., still insists on expending much "horticultural sweat" in digging his deep holes for peach trees. If he has made a valuable discovery in this line the "new departure" will be hailed with delight by all growers of this delicious fruit.

One thing is certain, he will head the peach grub, as that pernicious enemy to good fruit would hardly be able to live and breathe with from 18 to 26 inches of dirt packed over his head. That much at least he will have attained, and we shall all be owing a debt of gratitude for this advantage connected with his main discovery.

Is it not surprising that fruit growers for the last two or three hundred years should have failed to ascertain what is the proper depth for tree planting? Why did not some of the fathers gouge thus deeply into the bosom of mother earth and prove the unmistakable utility of the *deep mode?* Verily this is a progressive age, in which undiscovered truths in rapid succession are introduced and ushered into light! It is thus we exhibit progress. Nature we believe plants the acorn quite shallow, and allows some roots to shoot down and others to travel around and forage near the surface, whilst the stem shoots up in the air, but L. W. G's. theory obviates any trouble the lower roots may have in getting down. The deep roots are at once put in their proper place in the beginning, and those that have collateral or horizontal proclivities, should they be too deep, may get up *if they can* to their natural position and forage ground.

In your last No., Mr. J.W. Kerr, of Denton, Md., has given *this deep hole* theory an airing in a few words that sets this matter, we think, in its proper light. We would not wish to discourage any attempts or experiments tending to advance the art and science of horticulture, and we have the kindest feelings of fraternity for all the friends of Pomology in all sections of our country. We go for all useful improvements that may be approved in modern horticulture.

In the question concerning *our trees*, friend L. W. G. omitted, we do not say intentionally, to give our brief description of the soil, which in that part is rather light and thoroughly mixed with argillaceous slate, rendering the bank loosely thrown around the trees sufficiently porous for the purposes of vegetation. All authors are agreed that there cannot be too much earth for trees. Nature plants shallow, but man is disposed to improve on her teachings. The soil should be abundant, deep, and mellow; and the mode of planting may somewhat vary, according to climates, soils, and circumstances. As a general rule, in proper soils all experience has proven that, in planting fruit trees as deep or a little deeper than they stood in the nursery, is the proper mode. The views of our friend to the contrary notwithstanding. There must be something *peculiar* in or about his soil or location, or both, as you, Messrs. Editors, suggested in a notice of L. W. G.'s first communication.

With all due rspect, perhaps L. W. G. to some extent is his own nurseryman as well as orchardist; and in his deep tree planting, the exact *modus operandi* is not given. It may be that in digging up his trees he does not *always* follow the practice of lazy nurserymen in destroying the *top-roots*. These appendages he knows nature has made for some purpose; and shrewdly suspecting their use, he may have preserved and thrust them into the clayey sub-soil from 18 to 26 inches deep, their extremities being at the bottom of the holes and their entire length in contact with the sub-soil, from which they gather their supply of mineral substances—the appropriate food of this class of roots. If this is his practice, he has also secured another advantage. He has entirely obviated the necessity of staking his trees, which, however, any deep planting would accomplish. Thus his trees with elongated tap-roots, standing as it were on stilts, defy all droughts, storms, and borers, and the upper tiers of roots after all are not placed much deeper in the soil than orchardists generally have them. If this is the secret of his deep planting, it is not so strange after all. We should like to know whether or not he intends acceding to the proposition of friend "Peter."

We should be happy to accept the kind invitation of our horticultural friend, and may do so this fall should we visit your city again, and in calling at his country residence we should expect to visit his orchard and should not be surprised, if the summer should prove wet, if we were shown a small lot of dry materials *ready for a brush fire*, in that part allotted to deep planting.

Keswick Depot, Albemarle Co., Va. J. FITZ.

☞ **FRIENDS! advise your neighbors who intend taking the FARMER not to delay if they wish to secure the back Nos.**

The Dairy.

Co-operative Dairying—No. 3.

BY O. S. BLISS, SEC'Y VERMONT DAIRYMEN'S ASSOCIATION.

To the Editors of the American Farmer:

When the farmers of any neighborhood, after due investigation and counsel, have reached the conclusion that a factory upon the co-operative plan will meet their requirements, and have settled upon some plan of organization, the next step will be to fix on a site for the factory and procure a plan, bills of material and estimates for its construction, &c. And here, in my extreme desire to see all start right, and avoid the shoals upon which many factory organizations have foundered, I cannot but feel it incumbent on me to caution all against placing too much reliance upon general statements, plans and estimates, and upon their own inexperienced and unaided judgment in these matters. It is better to secure the advice of a competent dairy engineer or an experienced factoryman, than to work without understanding clearly what is necessary to be done. It cannot reasonably be expected that the clearest-headed farmer will understand all the subtleties of the art of engineering, or the economies of even plain architecture; and it is better, as a rule, to secure the advice of those who make a special study of such matters, even though it becomes necessary to pay a little more than day laborer's wages for their services.

In selecting a site for a factory three considerations may not be overlooked: 1st—There must be an abundant supply of good water. It may seem superfluous to dwell upon this consideration, so evident must this necessity appear to every one, and yet factories have in very many cases been compelled to suspend operations for want of water, and in some cases they have been erected where none could be obtained at any cost. Good cool spring water running into the factory, if abundant, is better than ice for all factory operations, and will entirely supercede all necessity for its use. A large well, with suitable power for raising the water, is a fair substitute; but there is danger that its capacity will be over-estimated, if it is not absolutely known in advance. If it becomes necessary to raise the water into a tank and hold it there for any length of time, it may be necessary to use ice with it for some purposes, in which case the additional expense of an ice-house will of course be necessary.

2d—Pure air is as necessary as pure water. Milk is exceedingly sensitive to the evil influences of all effluvia, whether the emanations of stagnant water or of vegetable or animal decomposition.

3d—The factory must be located within a reasonable distance of the milk farms. It is not good economy to attempt to haul milk over about two miles, unless some co-operative scheme by which the milk for several dairies may be hauled by the same team can be devised. Heretofore we have written of the factory system as a whole; henceforth it becomes necessary to treat of it under the three separate heads—butter factories, cheese factories and creameries.

Butter Factories.

The earlier butter factories adopted the pool and pail system of setting milk, which had been found to meet the requirements of the creameries established in the neighborhood of large cities; and although that system, now known as the "deep setting system," has still some advocates and adherents, it has been fully and clearly shown by innumerable experiments that more butter can be produced by the system known as "the shallow cooler system." The discussion of the pool and pail system, as adapted to creameries, we shall defer until we reach that specialty. As a system of butter production we do not accord to it any considerable merit, and we prefer to leave the discussion of its claims to the consideration of those who think they find in it sufficient other advantages to counterbalance the loss of butter, which most of its adherents are at this day willing to admit inevitably results from its employment, while we confine our discussion to that other system of factories which employ the shallow coolers or pans; of these there are many kinds, differing but little, however. The great and prevailing feature of them all is that the milk is spread out sufficiently to enable the cream to come to the surface before the milk becomes changed. The more effectually to secure this result, most of them consist of a pan within a pan, or a pan having some attachment equivalent to the outer pan into which water is placed to control the temperature of the milk and keep it sweet while the cream is rising. In some few cases we have seen the large pans used without the outer arrangement for cooling the milk. In this case pails of ice are set in the pan. Those who use these pans generally claim that they are "about as good as those which have the water attachment." They are mentioned in this connection, however, only that we may thus early offer a word of caution against accepting any cheap substitute for a good and efficient cooler pan. The milk set in these pans will, with proper care, remain sweet from 30 to 36 hours, and it is therefore desirable to set the fourth mess before the first is skimmed. Of course, this being the case, each set will consist of four separate pans, the size depending entirely upon the requirements of the establishment. Pans are made of any size, to suit those ordering them, but our own conviction is that it is better to multiply sets than to employ too large pans, and we would not, in the largest factory, use pans of more than 50 cows capacity, or say about 100 gallons, at four inches deep. During the flush of the season, when the cows are giving a little more than two gallons of milk, it will do to set it a little more than four inches deep, and farther on into the "heated term" the cows will shrink enough to make the coolers entirely efficient.

We have now reached a basis upon which to compute the size of our butter factory. Different pans are arranged differently; but, as a rule, a space of about 15 by 20 feet will be found ample for each set of pans adapted to the milk of 50 cows. If, for any reason, it is desirable to economize space, pans of twice that size may be used, but, all things considered, they will be found less convenient. No other part of the operation of butter making should be performed in the apartment in which the milk is set, and as a conse-

quence no other apparatus will be employed here except the scales and weighing can for weighing in the milk, and the amount of space required for that purpose need not ordinarily be taken into the account, as the platform upon which they stand must be half outside of the building, and so elevated as not to interfere materially with the arrangement of the pans.

Somewhere in the building there must be a tank of water in which to keep the cream. In most factories this is in the churning-room, but there cannot be any good reason why it should not be in the same room with the milk pans, and there are some good reasons why it should be in that in preference to the other. It is generally desirable to let the temperature of the cream rise a little, and the water which has been used for cooling the milk may be run through the cream tank, and will answer a better purpose there than the cold water of the aqueduct. Again, the cream in the churning-room is subject to more outside influences, as there must of course be a large amount of work of various kinds going on there. Unlike the milk-room the churning-room should be upon the ground, and good smooth flagging may be advantageously used instead of flooring. Another room adjacent to this will be needed for heating water, &c. A small engine for churning is the most economical power, and may be placed in this apartment. A good dry sweet cellar for keeping the butter completes the list of apartments. We find then that the plan for a butter factory for 100 cows will embrace the following particulars: A good cellar, size 20 by 30 feet; a neat high-studded cottage of the same size, a lean to 12 by 20 feet, dropped 2 feet below the level of the floor of the former building, and divided into two compartments. There should be a passage-way from the churning-room to the cellar, and it will be found convenient to have it near the outside door, to facilitate communication with the outside world. At the middle of one side of the building the platform for receiving milk will be placed, just high enough to have the milk run freely from the weigh can to the pans. A crane and windlass is generally employed to lift the carrying can from the wagon and hold it in position to be dumped into the weigh can. The building should be fitted up with windows and curtains, like any other cottage, and a light piazza or veranda on the sunny side will add to the appearance and utility of the building. A sort of porch thrown over the receiving platform far enough to cover the delivery wagon is not only a comfort to the deliverer in bad weather, but is a real advantage to the quality of the product by affording additional protection to the milk.

If it is necessary that the manufacturer should have apartments for living in the building, as is customary in many cases, the additional expense of doing them off in the second story, with a separate apartment in the cellar, need not be large. We would, however, provide other accommodations for that purpose if practicable.

The implements used in a factory do not differ materially from those used in good private dairies, and we do not deem it necessary to enumerate them here. Most factories are returning to the use of the dash churn.

Elsewhere we give a cut of milk pans such as are referred to by Mr. Bliss.

"THE COW;—The Best Breeds—How to choose a good Cow—How to keep her in permanent profit."

[We continue our selections from the essay of Mr. Hazard, and will conclude its publication in our next. The information it imparts should be studied not only by every professional breeder of fine cattle, but also by every farmer, to enable him the more readily to determine the qualities of a cow.]

How to choose a Good Cow.—Having decided what breed to raise, the first important step is to know how to choose a good cow. These are a few general rules: see that the cow is as much wedge-shaped as may be; that is, viewing her from the side view, that she increases in height and depth the further you go from the head; and from a front view, that from a small head and narrow neck and shoulders she gradually and regularly enlarges to a broad hip and back. 2d. See that her "mirror" or "escutcheon" is good and free from depreciating marks. 3d. See that her milk veins are large and prominent, and where it enters the stomach that the hole, or better if two, are large and deep: that the udder is full in the forward part, and that the teats are of good size, well separated, and not too projecting towards the sides.

A general examination should show the head small, slender, and lengthy from the eye to the nose; the horns thin and open, not cramped nor too curly; the eye full, but not too prominent, the latter quality indicating an excitability and consequent restlessness of disposition that is not favorable to the production of milk; the ear lengthy and broad, and well fringed with hair, which protects it from the annoyance of flies and indicates a strong constitution; a broad muzzle should be avoided, as showing a tendency to fat; the neck should be long, flat and narrow, with a tendency to rise at the withers, and breadth behind the arm to allow of a full expansion of the lungs, the chest being rather deep than broad; the flat-sided cow is more especially to be chosen as a milker; the hips should be wide, rugged and high, and the pelvis or haunches wide and large, drooping towards the tail; the thigh long and lean from hip to hock, the veins being prominent and easily felt; the legs slender with flat bone, and small flat feet, the hinder ones having good width between, to afford room for the udder. A long and thin tail is a great point in breeding.

The udder, to which all former points are secondary, the reservoir of the milk, should be free from hair, flexible and soft, with no tendency to flesh; the bag extending well forward, as level as possible with the belly, and high up between the thighs. The feeding veins should be particularly observed. In the heifer with the first calf they must be felt for with the hand; in their case two holes will be discovered by feeling under the belly nearly in line with the navel, on each side, in good milking heifers, of about the size of a dime. As age increases the holes extend, and the veins become large and easily perceived by the eye; the larger these feeding veins appear, the greater is the quantity of the milk. The teats should be well separated, not fat nor fleshy, and not too

long, but sufficiently tight to retain the milk, having a tendency downward—that is, to use the technical term, not *strutting*, or pointing away from the quarters, as this causes waste of milk and difficulty in milking. The hide also will be found useful in determining the fitness of particular cows for particular localities, but having little to do with the milking properties. If possible, it is better to accustom a cow to cold and exposure by degrees, in which case the hide will adapt itself to the altered condition by thickening and producing more hair.

A good cow not only yields much good milk, but almost in proportion to the quantity given daily is there a long continuance of the secretion between the periods of calving. But no cow should be allowed to give milk beyond eight months, before calving; the system requires at least one month's rest; the calf will be larger and healthier, and the mother will yield better and richer milk after calving.

The fact that the system is more capable of undergoing natural, though very marked, changes in early life without danger, renders a young animal indispensable for the dairy, either to breed from or to prove profitable to the keeper. To *determine the age* of a cow is therefore a matter of importance, and this can be done with great precision by examining the teeth and horns.

To determine the milking qualities of a cow many important points have to be considered. In addition to those we have mentioned, the skin should be free, thin, and may be covered with hair of any color, according to the breed. The tail is by some much looked to, and it is believed that when fine, and reaching down to the hocks, with a fine tuft of hair, it is associated with other good milking points. In addition to large milk veins the network of veins seen beneath the skin over the forequarters of the udder, and the udder itself, and those which pass upwards behind towards the tail, in fact, over the perineum, are large, they are *sure tests* of a competent milker. They should be highly developed, large and varicose; they are irregular, in zigzag lines, knotted, and more or less oblique. To estimate them it is necessary to take into account the state of the cows in respect of flesh, the thickness of the skin, food, general activity, fatigue, journeys, heat. It is necessary, also, to recollect that in both sexes all the veins are larger in the old than in the young; that the veins which encircle the udder are those which, if the cows are in milk, vary most according to the different periods of life; though scarcely apparent in youth, they are of considerable size when, after several calvings, the operation of calving has given the gland its full development. Finally, there is the most valuable of all methods—Guenon's system."

Guenon's Method.—Guenon, risen from the humble classes, and from his boyhood being among milch cows in the vicinity of Bordeaux, narrowly observed the relation between the amount of milk secreted and the developement of the patch of skin covered with upturned hair, extending from the udder upwards, and laterally over the thighs. He could tell almost infallibly about the exact quantity any cow would give, and the quality. And so may the thorough student of his system, as it is based upon facts and long observation. It is not very easy to denote intelligibly the whole system, in order to adopt it without further guide; a practical demonstration will prove more instructive than the perusal of a considerable volume, and our time does not admit of elucidating it here this afternoon. Charles L. Sharpless and Chalkley Harvey [Mr. Harvey's paper, with the drawings showing more distinctly Guenon's system, was published in *American Farmer*, May No. for 1873, vol. 2,] have each published excellent condensations and elucidations of the system, and those desiring to study the theory will find the article of the first and the facts of the second, with more elaboration of them, in a little book I edited, and published by Porter & Coates, of Philadelphia, on "The Jersey and Guernsey Cow."

Ten forms of scutcheons or mirrors have been described, and constitute the basis of Guenon's classification. The surface of the scutcheon is distinguished by the hair turned upwards, and opposite in direction to that covering other parts of the animal's skin. This hair differs from all the rest in color, and is fine, soft and close. The scutcheon springs from the middle of the four teats, whence a portion of its hair springs, and extends towards the navel, whereas the other part rises towards the inner and upper part of the hocks to the middle of the posterior surface of the thighs, then rising over the udder on the perineum, it extends in some classes to the upper angle of the vulva.

The surface or extent of the scutcheon denotes the milking capacity, its form and outline indicates the class, the fineness of the hair and the color of the epidermis the quantity and quality of the milk. For the most part, it is very easy to distinguish the scutcheons by the upward direction of the hair which forms them. They are even sometimes surrounded by a line of bristly hair turned backwards, and formed by the meeting of the upward and downward hair. It is just as important that the bull should have as good a scutcheon as the cow, as the qualities of the mother inherited by her son will be transmitted to her daughters, and for this reason also it is very necessary that the bull shall have a good parentage.

[TO BE CONCLUDED IN OUR NEXT.]

CROSS-BRED DAIRY COWS.—A subscriber at Culpeper, Va., writes us: "Before the war I had a fine herd of pure Devons, descended from George Patterson's herd chiefly. Some of my cows were superior milkers. The war scattered them and nearly all else I had to the four winds. I got together some four or five of them after the war, and had a bull out of an imported Kerry cow—the finest dairy cow I ever saw—and by an imported Alderney bull. I bred him to my Devons—I could do no better—and raised a herd of very superior dairy cows of Devon, Kerry and Alderney mixture. They became known and in demand, and I readily sold them at from $50 to $150, according to age and quality; but I never felt comfortable after selling a dairy cow until I heard some time after from her purchaser, so much depending upon feed, attention and good milking, which are so rarely afforded. As I could not feel assured of transmitting the fine dairy qualities continually with cross-breds, and my grass being very fine, I determined to introduce the short horns, and am now aiming to bring my herd to pure-bred short-horn alone."

Foreign Correspondence.

Management of Stable Manure.

To the Editors of the American Farmer:

My letter dated December 2, 1873, giving reports of last year's crops in Europe, I hope you have received. More particulars I cannot give. I only know that on the boundary of Russia large heaps of rye are lying on railroad stations, waiting for shipment. There are not lines nor cars enough to transport them further. According to your wishes, I'll try to write some information about agricultural affairs, and I think you have no objection when I speak about a theme I lately discussed in our Agricultural Assembly, viz: *How to use stable dung in the best way.* Whatever you should find useful to your farmers, or worthy of notice, please use in your own manner.

Stable dung is considered in our country as the best, cheapest and surest manure of all, and every farmer ought to strive to preserve this manure in its highest strength until it reaches the roots of our plants. It requires great care and labor to handle stable dung in the right way, but it is a paying labor. Of all the fodder we give to our animals, one part is used to keep up respiration—that is, respiration through the lungs as well as perspiration through the skin. The ingredients in fodder used up for respiration are starch, sugar, fat and oil, and consist mostly of oxygen, hydrogen and carbon. Other ingredients, especially albumen, casein and gum, are consumed in forming flesh and fat. The third kind of ingredients in fodder are those forming bones,—such as phosphoric acid, lime and magnesia, together with nitrogen. The activity of life appears in this way. Continually atoms of the body are dissolved and leave it; other atoms are new-formed out of the well-prepared ingredients of given fodder, so that the bodies of animals are constantly at the same time about to be dissolved and to be renewed. All material not used in conserving or enlarging the body is either expelled through the lungs or the skin, in the form of gas, or it leaves the body through the bowels. This last liquid and solid excrements we call stable dung, and it is evident that the better we feed our animals the more and richer dung they will return us.

The most soluble materials are going away in the urine; those parts more insoluble leave the body as solid excrements. In urine we find mostly nitrogen, potassa, soda and salt, because they are very soluble; in the solid excrements we find mostly carbon, lime, magnesia, silicious earth and phosphoric acid. Urine, rich in nitrogen and potash, ferments very soon, and has a rapid stimulating effect on plants. Solid excrements produce more humus on account of their great organic matter, and are grain-producing on account of phosphoric acid. Their effect on plants is slow and lasting. These two kinds of dung, urine and solid excrements, complement one another. They ought to be caught in litter and well mixed up before they are carried to the soil. A man who neglects to collect all urine and excrements produced by his animals, or who collects them and allows them to be in his yard outwashed by rain showers, or to mould or to burn, is a squanderer; all his sorrows and hard labor cannot compensate his loss in manure. But how many farm-yards we find full of puddles of dung-water, such as by rain showers run over and leave the bad householder!

On farms where more filthy fluid is gained than beds of straw can swallow up, the fluid is to be collected in water-proof cisterns. The cisterns ought to be deeper than wide, to keep the urine cool, and so to prevent a rapid fermentation. They ought to be covered, so as to keep off sun and air, and no rain-water should fill and wash out these cisterns full of a costly, rich matter. But as urine soon begins to ferment, and gases (especially ammonia) volatize, urine ought to be mixed with gypsum, sulphuric acid or sulphate of iron. These materials will prevent a rapid fermentation and will retain all ammonia. Better than to collect urine in cisterns is to pour it over composts. Composts are all mineral and organic wastes and scrapings collected on a farm. They contain a large quantity of useful minerals and humus, and give, by adding urine, a very rich and complete manure for all plants.

In handling the solid excrements of our animals, the best way is to keep them in the stable as a bed for the animals as long as possible, for then we obtain a very rich manure and in the best condition. The solid and fluid excrements are well mixed up with litter, and the urine keeps the manure equally moist, so that fermentation slowly begins, and it never gets mouldy. Cattle have a very soft and even dry bed when straw is used sufficiently. This kind of dung has got a light-brown color, and the straw is sufficiently mellow. To prepare the dung in this way, the stables ought to be large enough to let cattle run about, or when they are chained the stables ought to be so arranged that they can be elevated when the heap of dung is growing. Another gain derived from it is, the air in a stable in which the dung lays many months keeps purer than when the dung is stirred up and removed every week. Those who have no room to fill up the stables with dung in this way ought to take care to carry the dung from the stable at once to the land, and to spread it regularly. It is a great fault to let stable dung lie in small heaps on the field, because fermentation will arise very irregularly. The sap of such heaps dries up; the under part gets either burnt or moulds. All ammonia formed during fermentation is then taken away by the moving air. Another mischief happens: Below these heaps, lying a long while, the soil is oversaturated with dung; the rest of the soil, when the heaps are afterwards spread, gets an outwashed or mould-burnt, fire-fanged, useless stuff. Therefore dung brought on land ought to be spread at once. Formerly it was the rule to plow dung under as soon as it was spread; for, in the first place, when the dung commences to ferment the loose soil which covers the dung catches all escaping gases, and retains them; secondly, because the fermentation within the soil will dissolve the mineral substances. Lately, however, it is found and acknowledged by the best farmers and scientific men that dung lying even for months flat on the surface of the soil does not lose its fertilizing properties; on the contrary, it softens and loosens the soil for litter, especially when thickly spread, and in most cases the harvest was a richer one when dung had laid on the surface

for a long while than when plowed under at once. It is said the shade causes this very good result, for we know that when a piece of land has been covered with some straw, or even with a board, the soil has become of a very mellow character. Another advantage is, when old pasture lands or fallows are covered with dung over winter, all pasture plants and weeds will grow in the spring very luxuriantly, and will, when turned under, give the soil the advantage of a green dunging. In all hilly countries it is, of course, a necessity to plow the dung under, since the rain would wash away the greatest and best part of it. On such hilly farms, when, after spreading the dung, time or circumstances do not allow of plowing, I would carry the stable dung in larger heaps, of about four or five carts, and mix and cover this heap with earth, peat or mold, until I could spread and plow. In this way the dung is not only preserved but enlarged. This ought to be done likewise when the dung has to lay a long while in the farm-yard. No streams of rain-water ought to run over or through it, but when it begins to heat all urine or filthy food collected ought to be poured over the dunghill. The dunghill ought to be trodden down by horses or cattle, for when lying loose and hollow it will ferment rapidly and unevenly. But to prevent all escaping of ammonia and other gases it is best to mix the dung with some gypsum or sulphate of potash. Dung when overheated loses in a short time twenty per cent. of nitrogen.

The dung of sheep, when lying in the stable for months, is just as well to be strewed over with gypsum, since the dung of sheep is rich in ammonia and very rapidly ferments. Some keep the sheep dung always in a moist state by pouring water over it at least every week. E. WENIG.

Neudorf bei Schonlanke, Prussia, Jan. 18, 1874.

[We are much indebted to our German correspondent for his valuable letter. American farmers, though theoretically alive to the importance of proper care in the management of their stable manure, are, it must be acknowledged, very deficient in practice in the thorough utilization of this great fertilizer of Nature's providing, and any stimulating to better ways we welcome from any source. The subject of absorbents is one we have frequently called attention to in these pages.

The plan of accumulating under the animals all the manure made, as proposed by Mr. Wenig, is not one which, so far as we know, is ever systematically adopted, though negligence or indifference would sometimes seem to make a halfway approach to that course. This, however, is far from what is meant by Mr. W., whose plan, we believe, is pursued by the great English farmer, Mr. Mechi, with his fattening cattle. As we not long since remarked in our Agricultural Calendar, the use of covered yards for manure is out of the question in many cases; but the careful protection of the manure pile against washings, from the drips of roofs, from leaching into adjacent streams, against fire-fang, from insufficient moisture at the proper time, from too rapid fermentation, &c., is within the reach of all, and is as effective a course for its safe-keeping as most farmers here can adopt.—*Eds. A. F.*]

The Agricultural Situation in France—Statistics—Sheep Notes, &c.

Messrs. Editors American Farmer:

The uncertainty which characterized agricultural interests during 1873 presides at the birth of the year 1874. For the moment, till the political situation be ameliorated, a brake seems to be put on everything. When industry and commerce resume work, the farmer will find outlets for his produce. In the way of progress, the agriculture of the past year has nothing of which it may be ashamed. There has been marked increase in the number of live stock and noted amelioration in its breeding, as well as improvement in the economy of feeding. Since forty years the price of meat has doubled in France; hence, the stimulus for cattle farming. The price of manual labor has risen, as there is a tendency to immigrate to the cities, and a sensibly growing desire to emigrate to America. If, then, the cost of production has risen, so has also the prices of the products themselves. To assert that live stock means manure, is to suppose rather a diminution in point of interest, a consigning to a secondary rank, of commercial fertilizers. Farmyard manure is becoming more than ever the base of the soil's fertility. But this manure even is not a complete manure in itself; nor yet an adequate source for restituting to the land what cultured crops abstract. Hence, why science is an invaluable aid, in indicating those substances which can be of service to agriculture when not of higher value for the wants of industry. Hence, also, the importance of commercial manures. The past year has witnessed a new impulsion given to the manufacture of mineral phosphates, not alone in the valleys of the Ardennes, but in the south of France, and the Sologne. It will be something like one of the many honors of the nineteenth century to have discovered and worked these subterranean beds, so rich in means to repair the ordinary exhaustion of the soil, as well as for the reclamation of heaths and moorland. The increased employment of machinery, from motives of necessity as well as of economy, is also a notable incident in the records of agricultural advance in 1873, and not less significant are the strides made by native manufacturers to supply their own markets and perfecting even imported machines. At one time France had to command all her locomotives from England; at present, the latter orders such extensively from France. In a little time it will be the same story perhaps for farm machinery. Old systems of culture are more than slowly disappearing; here, the vine succeeds to wheat; there, where tracts of land had a rotation of two crops of wheat and a fallow, forage plants and roots now alternate with cereals. Some farmers are too slow in their progress, others go astray by marching too precipitately. The grand total of agricultural wealth, of capital, has increased, and thus authorizes more advances to be made to the soil: to cultivate it with more material; to stock it with more cattle; to enrich it with more manure, to control it with more of science; to direct it with more of experience.

The government has published agricultural statistics for the year 1872—which is comparatively rapid as compared with previous publica-

tions. The delay appears to proceed from a too numerous army of collectors. Bearing in mind the invasion, France, as a general observation, has about the same numbers of live stock in 1872 as she had in 1840. It would not be correct to conclude, however, that the war has put her back thirty years, for her productive and recuperative powers have proportionately increased. She suffered a loss in horses by the war, numbering upwards of 160,000; of black cattle, 400,000 head. The eight millions of a diminution in sheep must be largely attributed to a change of culture, consequent on the cessation of wool being profitable, owing to foreign markets, as well as to the desire to produce beef and precocious mutton. At the close of 1872, then, France, in round numbers, had three millions of horses, eleven millions of black cattle and twenty-four and a half millions of sheep.

The winter is peculiarly unfavorable, consisting so far of persistent fogs, which, by preventing all nocturnal radiation, maintain a disagreeable humidity, under cover of which small black slugs feed on the young winter wheat; and although powdering the surface with lime destroys many of them, the invading army seems to possess a landwehr, to judge by the hosts that come to the rescue. Crows are the best extirpating agents of snails at this season; unhappily every man's hand, that is to say every one's gun, is against the bird. This abnormal mildness will in due course turn to severity.

It is asserted that France annually loses, by not carefully gathering and utilizing the stray feathers of barn-door fowls, the equivalent of her yearly purchases of cotton. The wonder is that anything at all is lost among so economical a people as the French. It is suggested, then, to cut off the found feathers, with a pair of scissors, on each side of the quill; place the loppings in a canvass bag, and rub both together between the hands, as washerwomen do linen. At the end of five minutes the feathers will be crisp, elastic, downy, and will at any time bring ten shillings per pound. This down is very much in request to make cloth, and those light pillows which cover French beds, instead of counterpanes.

In the sheep war—mutton *versus* wool—which continues, an eminent and successful flock-master recommends the abandonment of the *Metissage* system, as unsuitable to the precocious production of meat, and pursuing the crossing as far as to the complete absorption of the race crossed. *Metissage* means a crossing not repeated, or rarely renewed with the pure type, between different races of the same species. Another debater urges farmers to rather curtail the number of sheep than to give them an insufficient pasturage, even though momentarily. He has visited the steppes of Russia, and found nothing was more detrimental to an animal's health than an alternation of penury with abundance, and vice-versa. The feast and famine danger is illustrated by the pasturage of the steppes, where cattle live on luxuriant herbage or have to submit to what they can find when the drought nearly sweeps away all vegetation. The stomach affected by these alternations suffers cruelly; dilates and contracts inordinately, producing perturbations in the system, that may not be stranger to the chronic development of the rinderpest.

The manure of the cattle sheds, attached to the *abattoir* of Paris, is contracted for at the rate of 12,000 francs per annum; the straw for littering is to be also provided. There were slaughtered at the city *abattoir* during the year 1872, 162,000 oxen and cows; 130,000 calves, and 1,000,000 of sheep; the latter showed a diminution as compared with previous annual consumptions. Italy supplies France with thousands of head of cattle, despite the complaints of the dearness of meat in every Italian—indeed, in every European city. With the view of overcoming the prejudice of the Italian peasantry against official inquiries, an agricultural professor has undertaken a general investigation, aided by peasants as co-commissioners. The Italian Government has adopted the excellent plan of awarding prizes to the cultivator who shall compose the best essay on his system of cultivation, or on that ordinarily pursued in his parish, with suggestions for amending whatever may be defective. In the programme of study at the agricultural college of Milan, "literature" is one of the branches to be studied; it seems strange that German should be preferred as a language to be acquired, before English or French—before the latter especially.

The publications and alleged cures relative to the vine bug, continue as plentifully as the leaves in the vale of Vallombrosa, and which is the best proof of the incurability of the scourge. M. Laliman denies that the phylloxera "has existed since all time in America;" on the contrary he asserts it was exported to America by European stocks, and care should be taken against allowing the evil to return. So say we all of us.

Paris, January 24th, 1874. F. C.

Correspondence.

A Reminiscence.

To the Editors of the American Farmer:

Your correspondent, after an extensive ramble over Kentucky and Ohio, in the fall of 1837, found himself a sojourner, for a brief space, in one of the hotels in the city of Rochester. On returning from a view of the Falls of the Genesee and other sights about the city, he was met by a gentleman, who turned from the register of the hotel and inquired if a gentleman of my name, he had served with in the Legislature of Virginia, was a relative of mine? I replied he was an uncle. He introduced himself as Samuel H. Fitzhugh, of Genesee, Livingston county, and at the time he was a member of the Virginia Legislature, resided in the city of Wheeling. He remarked to me his carriage was at the door, and desired me to point out my baggage, which, in a jiffy, was put on behind, and I invited to take a seat. This, permit me to say, was so much like our manners in Virginia, I took to Mr. Fitzhugh at once, accepted a seat by his side, and we were soon whirling away over a delightful road up the beautiful Genesee.

I spent ten days most pleasantly with him and his relatives, at Mt. Morris and Genesee, and in rambles over what was to me then a most interesting section of country, but now so changed I imagine I would not recognize it.

In an extract from a letter received a few months since from Dr. Daniel H. Fitzhugh, of Mt. Morris, he says: "Of five brothers and five sisters I had at the date of your visit in 1837, all are gone but three sisters, and I am in my 79th year. My father removed to this State in 1817, from Washington county, Md., near Hagerstown, where all his children were born. He was born at Rousby Hall, (I think is the name,) at the mouth of the Patuxent River, and removed from thence, with his father, to Hagerstown, about 1789. My grandfather came originally from the neighborhood of Dumfries, in Virginia, in which State most of our relatives live. The swamp to which you refer I have ditched and drained, and the meadows and cornfields are equal to any in the valley, and a branch of the Erie railroad runs through it."

Messrs. Editors, many of the best people in that beautiful Genesee country, your noble little State of Maryland had sent there, whose intelligent industry had reaped a rich reward in making it bloom and blossom, as far back as 1837, when the New York Central road was only in process of building. As to what it is now, I leave you to infer.

When I arrived at Albany, I carried out a resolution made before leaving home, which was to make a visit to the venerable and then widely celebrated Judge Buel. I found him not far from Schenectady, in that barren looking region of light drifting sand, and his beautiful farm was most truly an oasis in the desert. I need not say that I was delighted with the genial old man, who was at that day more universally and favorably known over the whole south than any other agriculturist, except the lamented Skinner. It was not long after my visit that he sold his interest in the Cultivator to Luther Tucker, who was then editing the *Genesee Farmer*, at Rochester, and after a career of usefulness has also been gathered to his fathers. I regret to learn, through a friend at Albany, that Judge Buel's farm has long ago passed out of the hands of his descendants, neither of his sons having inherited his taste as an agriculturist. Yours sincerely,

J. M. McCUE.

Augusta County, Va., January, 1874.

Plowing and Manuring.

Messrs. Editors American Farmer:

The above constitute two first essentials in the production of good crops, and should receive special attention at the hands of every one who would cultivate and produce a good crop, let it be corn, tobacco, cotton or potatoes, etc.

Thorough plowing I consider the more important of the two, for unless the ground is *well* plowed, the best manuring will have comparatively little effect, whereas land well and thoroughly plowed with light fertilizing will produce fairly, but with better manuring will produce at a profit; still there is a limit beyond which profit ceases, and just where this limit is the cultivator must be the judge, after experimenting; but generally there is little danger of exceeding it.

Plowing, to be thorough, should be so performed that the soil shall be broken and made as fine as possible; you cannot pulverize too much.

Plow deep is a relative term, and may mean very differently on different soils, for while four inches may be deep for one soil, ten or twelve may be less so on others, so that here we must be governed by the nature of the soil plowed. Subsoil plowing is a distinctive difference from the common acceptation of the term plowing, yet is often used with the same meaning. Sub-soiling on most soils, in connection with good plowing, is one of the essentials of certainty of a good product; the deeper and more thoroughly the sub-soil is broken the better, as no crop will be as likely to suffer the effects of drought or wet where the ground is sub-soiled, as where only surface plowed.

In plowing under manure it should not be turned down to the bottom of the turned soil, if we wish the benefit of any portion of it in the present crop.

The nearer the surface, and have it covered in the soil, we keep manure, the greater benefit the crop will receive from it. Herein lies one benefit of plowing under the manure shallow, and again plowing the same ground a trifle deeper; which, while it mixes the manure with the soil, still keeps the greatest portion near the surface, just where the roots of the young plant will be benefited by it; and as the water of rains dissolve and wash down the portions of the salts, etc., the later roots of the same plants find and appropriate what they most require, and thus the manure is equalized through the soil.

Southern men have informed me that it would not answer to plow deep, as with their sudden powerful showers the land would go seaward, from washing, I suppose; however that may be I am unable to say, as I have no experience there; but from what I read of the experience of the most successful Southern planters, I think I should venture a trial and see the result. I know here at the North the more shallow plowed ground washes worse than that which is deeply worked, as also crops grown on shallow worked soil are less certain and more subject to the vicissitudes of the season, wet or drought, than where the ground is deeply worked.

W. H. WHITE.

Westborough, Mass., Feby. 9th, 1874.

Merino Sheep in Connection with Grain Growing in Maryland.

Messrs. Editors of the American Farmer:

If the farmers of Maryland would increase the products of their farms, let them devote fewer acres to the plough and procure one sheep to each cleared acre. More grass and the manure thus made will enable them to grow more grain and improve their farms; the annual increase of the flock and their wool will add greatly to their annual profits and the fertility of the farm, and this will greatly reduce the force required on the farm, and we would soon hear less of worn-out land and of farming being unprofitable.

The young farmers are those to whom we look for this change and not to the older ones, as they have their own ideas and are not likely to change, and rather look upon this as an innovation, or prelude to induce them to buy our sheep. Well, let them cling to their cherished ideas; we will not interfere with them, neither will we urge them to buy of us.

There are now small flocks of coarse-wooled leggy sheep roaming over many of their farms; these are of little value now, but yet with these introduce a few Merino rams and ewes and treat them all well, and annually select the worst of the flock and feed them up in a separate flock and sell off to the drovers and butchers, or to some less favored farmers, and then breed up and improve your flock. The question may arise why I do not recommend any of the so-called mutton sheep. I know the reader will draw this inference, and with that we shall not contend. In defence of our position, we will merely say that although for over a quarter of a century we have bred the Spanish Merino, yet during that time we made it a rule to buy at different times the various kinds of sheep before the public, so as to satisfy us fully as to them and their qualifications. We in turn sold them off, and it is not likely we will again try any of them, as we are fully satisfied with the Merino, either as a mutton sheep or as a wool producer, or for the two combined; and yet we will not find fault with others for breeding those they fancy, although we have little inclination to repeat those experiments, as our own experience disposes us to continue with the Spanish Merinos. I am confident that one energetic man would thus change the entire routine on many a farm in Maryland, and there are those who read this who will live to see many a now dilapidated farm become the home of choice Merino sheep, and in time gradually change to a fertile, profitable and lovely place. Men are progressive; these changes must and will take place; do not charge these as ideas which we have been taught. Writing is not our forte; by request we give the practical ideas of one who has grown up and made his living on a farm. When we commenced, our farm was a barren waste, the buildings dilapidated and small, and (I may add) our purse also.

We were young and energetic, and had to work to live and pay for our house and flock.

Brownsville, Pa. JOHN S. GOE.

[The papers on sheep-raising by Mr. Goe, were prompted by a request from us. He has also been urged by some of our readers to give a description of his flock, which we hope he will do. Genl. Goe writes us that he has a demand for all his surplus, but when he first commenced the business he was considered a fanatical young man, and friends remonstrated with him against his entering into it, in his then straitened circumstances. Although the fine-wooled sheep may be the best for his location, however, those who have ready access to good markets, will probably see their interest in the selection of other breeds of sheep. A very long acquaintance with Genl. Goe, as a breeder, induces us to have much confidence in his judgment, and we consider him incapable of taking the view he has done, from any other motives than those prompted by a desire to impart useful information to his brother farmers. P. S.—Since the above was received, we have another short communication from the writer, in which he goes back to the patriarchal ages of the world, and cites the case of Laban and Jacob, to prove the utility of skillful breeding of sheep. We will give it in our next.—*Eds. Am. Far.*]

Straw as Manure.

To the Editors of the American Farmer:

There are few of our farmers who are aware of the inestimable value of straw as a manure, to be used in spreading it broadcast in the fall or early winter, either over grass or wheat. The generally accepted belief is that it ought either to be fed to the stock of the farm as food, or trod under foot in the barn-yard or stables, before it is fit to be hauled out as manure. There never has been a more wasteful, expensive and short-sighted blunder committed, (and I am mortified, as a farmer, to make the acknowledgment, that as a class, and even with the intelligent and reading farmers, the number who persist in the policy of carrying the stone in one end of the bag, is far greater than you imagine,) than to persist in disposing of the straw in this way I have for a long time been a convert to this idea, and have tried it several times to a limited extent. In March last, we were visited one night with a violent rain storm, that found the ground thawed for five or six inches on top, and frozen below. On wheat fields that were steep, the earth, mellowed by the frosts of winter, washed very easy, and following the slight traces left by the teeth of the drill, the water carried off the soil to the depth of the thaw, and in the morning we were saddened to see the frightful series of gullies, some of considerable width, *harrying* the hillsides. Fearing, if neglected long, the damage would be increased, as soon as it was dry enough to venture on it we had straw from some convenient ricks taken out and transferred into the gullies. The wheat could scarcely be seen. Clover and timothy seed, two-thirds of former and one-third of latter, our usual mixture, either for manuring or pasture, were sown at the time we always sow, if state of ground, calmness of air, &c., will permit, (the 10th of April) and at harvest the wheat was heavier than on any part of the field, and the crop fell over, and timothy lodged on all the ground so covered, that I was appealed to by a neighbor to permit him to cut it for hay. But my experience and observation is not even worthy of mention, by the side of the experience and regular system of one of my countrymen, Col. David S. Bell, of Fishersville, who, I feel at liberty to say, deserves the compliment of being thus publicly designated as the best farmer in Augusta county, and I do not think our most intelligent and observant farmers will regard me as saying anything but truth, if I should even embrace the whole State. His farm is a very rolling black slate soil, and for years he has made hay somewhat the preponderating crop, and on inquiring of him last May, whether this heavy bleeding process, as most would regard it, does not tell rapidly upon its fertility, replied, "No;—but on the contrary, its fertility has increased." I was riding with him through his

farm, on the fourth Monday in May. On the top of one of the highest hills on his farm, he called my attention to a part of a field in clover, at the distance of a third of a mile, and asked me what I observed peculiar in its appearance. I replied it seemed of a darker hue and more luxuriant growth, and that it might be lodged. He said it was perhaps the thinnest part of the field, that last fall he coated thickly with straw. His plan is to keep no more cattle or horses than are needed for milk and to work, and these are either kept up all the time or in the summer run on lots not intended for the scythe. He cultivates fine crops of wheat and corn, and as soon as he is done seeding, begins to haul out and spread his straw on the wheat, and if he has it to spare, on such parts of his grass fields, not meadows in the usual acceptation of the term, because the highest lands on the farm of 600 or 700 acres are mowed as well as the meadow proper, and it is no unusual thing in this county to cut two to four tons per acre of the finest clover and timothy hay, the latter largely predominating. The past season Col. Bell's hay crop, I think, was in excess of 300 tons, and at home sold at 75 cents per 100 pounds, and he is paid to haul it two miles, to the nearest depot. With the fertility of his land increasing, who will say that the use of straw in this way, as a manure, is not preferable to the old-fogy plan of converting it into manure, or selling it to the paper makers, on which subject I will, in another article, have something to say.

Respectfully yours,

J. M. McCUE.

Merino vs. Cotswold Sheep.

Messrs. Editors of the American Farmer:

I have read a communication in your Jan. No. entitled, "Will it pay to grow Merino Sheep in Maryland?" over the signature of John S. Goe. To this inquiry I would reply in the affirmative, could I agree with Mr. Goe, that it would bring about so happy a change to our dear old State as it did with this "*barren hilly*" farm of which he speaks. Any system that will improve our lands so magically should be eagerly sought by our live farmers. I am always glad to see a spirit of improvement among our farmers.

I do agree in part with Mr. Goe, that farming in connection with sheep-growing is profitable and improving to the land if conducted properly. He is considered wise who can make two blades of grass grow where only one grew before. Then how much more should we appreciate a brother farmer who seems to have made a thousand blades grow where none grew before; and his "Merinos alone did it."

These are the kind of farmers we want among us, who with such zeal and energy would turn our barren plains and hill-sides to verdant fields of plenty. With 20 or 30 such enterprising farmers, with their "*Merino Sheep*," in old Charles co., we would hear no more of hard times. Now, brother farmers, if we can work so desirable a change in our dear old farms by the introduction of these wonderful sheep, "*The Merinos*," "which alone can do it," let us be up and doing, and follow his example. We can get thorough bred rams from Mr. Goe, I am sure. But should we engage in breeding the *Merinos*, what will we do with the lambs? The butchers object to them, as they have an unpleasant flavor, and soon the farmers would be supplied; then where would be the demand? Why, we would soon find ourselves in the same category that the farmers of Pennsylvania were some few years ago, who, finding no sale for the vast number of *Merinos* which they had raised, butchered them for their pelts, whilst here in Baltimore and Washington our *common* sheep sold for from $2 to $5, according to quality. Four years ago only, you could buy as many of these same sheep as you would wish from 75 cts. to $2. Breeders, to get them off of their hands, would send down in Maryland by the 1,000 and put them out to farmers on shares; this I know to be a fact. I was in Washington last Nov., and saw a lot of *Merinos, fat*, sell for $2.90 per head, whilst at the same time common sheep from my own neighborhood sold for $6 per head. If I grow sheep for profit I want a sheep that will yield the most wool on the best mutton carcass, which sheep is the *Cotswold* undoubtedly. The Southdown are the best mutton sheep, but they are too small and do not yield enough wool. The common sheep of Maryland will shear from 4 to 8 lbs. of wool and bring double as much for mutton as the *Merinos*; in fact I prefer any breed of sheep to them. Very respectfully,

FARMER.

Charles Co., Md., January 17th, 1874.

Quo Tendimus?

Messrs. Editors of the American Farmer:

We of the South are in an anamalous position. The late monetary revulsion and heavy fall in our chief staple has left the agriculturist, especially of the "cotton belt," without chart or compass.

If it shall produce that new departure which I have so long strenuously advocated, viz: a system of mixed husbandry, well; if not, the people will deserve to reap the reward of their own folly.

A people with year after year of bitter experience who continue to pursue a policy, (suicidal at best) to produce one single article of commerce, the price of which is governed chiefly by a 'ring,' and to purchase almost entirely from *this ring* their daily supplies, is so fatuitous that while it should create surprise, it ought hardly to excite sympathy. And yet, glancing at the portal of the new-born year, I can see so far no contemplated change of policy, save only so far as to those who are so crippled that they are unable to proceed at all. The question at the head of this article very naturally arises—"*quo tendimus?*" and it is one pregnant with serious thoughtful consideration of future interest. With all their bitter experience I believe the Southern farmers 'as a body,' were funds ample, would plant one-quarter to one-half more cotton this year than they did in 1873, although it is now selling below the cost of its production; and wherefore? It is so hard to leave old beaten paths, and each one living on that annually-recurring futile hope, that higher prices will prevail, and little will be made, as the people are too much impoverished to plant largely,—*ergo*, now is the accepted time for our golden dreams to be realized. Alas! each succeeding lapse is yet more fatal.

As Mr. Hill, of Georgia, very tritely remarks:

'a people who are not self-sustaining are and will *ever* be slaves to those who supply them.' Plant half your land in cotton, brethren; make it rich, cultivate it nicely; put your other half in grass and clover; get some choice stock; if only a few, get the best; determine you will raise your own supplies, if no more; and if at the end of five years you are not a happier, wiser, richer, and better people, with more money, more self-respect and more respected, then I will agree to 'go where the woodbine twineth,' and to sit at the feet of the veriest fool for future instruction.

With best wishes for you and your many readers, I am, respectfully, yours,

Halifax Co., N. C. JNO. D. THORNE.

Peas and Pea Fallows in Virginia.

To the Editors of the American Farmer:

Your favor reached me this morning, asking of me an answer to the following questions of one of your correspondents, as to my mode of cultivating the black-eye Southern pea, the amount of seed per acre, and method of sowing, whether in hills or drills or broadcast; also, time of sowing and usual product per acre; method of harvesting and threshing. I try to prepare my lands thoroughly, and on the first Saturday in May, and on each succeeding Saturday of that month, I sow in drills three feet to three and a half feet, the black-eye and the black pea, which was known when I first got it as the Shinney pea. These are chiefly for family use and for seed, as they ripen better and can be kept pure and unadulterated; these usually require but two workings, and those planted or sowed in May must be worked, or the grass, however well prepared, will destroy the crop. About the first of June I prepare the land well and sow on the rough a bushel and a half of all the pea tribe, and a bushel of plaster, per acre, and harrow them in, and sometimes roll after the harrowing, as they often come up better and can always be much better harvested. I think the yield about fifteen to twenty-five bushels per acre. The broadcast will usually produce the best, and can be harvested the better or plowed in much better, and be of greater service to the land and crop of wheat and grass following it. The first ripening of the broadcast peas I pick, with women and chaps, who will pick more than men, at far less cost. I then turn on my stock, according to the crop, preferring my hogs; but they are first-rate for any and all kinds of stock. The black-eye pea is generally preferred on account of looks; (the old renowned Virginia dish of peas and pork is hard to beat!) but if he will shut his eyes the black or Shinney pea is far preferable in taste and richness, and will yield from one-third to double per acre, both in the seed and the vine, and I think it best for the land and the wheat crop following. I greatly prefer the fallow or stock pea, which, in the Richmond market, generally sells from twenty-five to fifty cents per bushel the cheapest. When I buy the seed I always order them from my old friends, Messrs. Allison & Addison, of Richmond, who are as reliable as any I have ever tried in any and every thing in their line of business. Where the pea is wanted for harvesting it is best to have a lot to itself, as they should not be harvested until the majority are ripe, which is too late for the stock to be benefitted, and for them to be turned in for wheat. These should be mowed with a scythe as grass, and permitted to at least wilt, so as not to shatter too much, then moved to the barn or house and put away so as to dry out without heating, (which may prevent their coming up,) and in the winter frailed out, which is easily done, as the dry ripe pea comes out very easily, and the green ones remain, which, with the vine, are the best feed I know of for sheep. These will eat the dry hulls from my picked peas in preference to my best hay. The pea is then run through the fan and put in boxes or barrelled up. The broadcast pea in dry weather is, I think, decidedly better, on account of shading the land more.

In good old times I considered the pea, potato and tobacco crops the most certain crops we cultivated in these parts. In dry seasons the pea fallow I think the best for wheat, but if the season suits I decidedly prefer the buckwheat, of which I have written so much it seems useless to write more.

Thus, my dear sirs, I have tried as briefly and as clearly as possible to answer all of your correspondent's questions, fondly hoping some of your many more gifted writers will give you a better article, and thus exclude mine from your valuable *American Farmer*. Your February No. has not as yet made its appearance; as soon as it does I'll try to prepare my promised article. With best wishes for your highest success and a liberal response from your many good and able writers in the good cause, I am, as ever, most truly and sincerely your old friend,

Albemarle County, Va. GEO. C. GILMER.

[We are much obliged to our friend for his answer to the inquiries of a correspondent in Fairfax county, Va., who has farmed many years in Canada West, where, he says, the pea precedes and is a good preparation for the wheat crop. We naturally turned over his letter to Mr. Gilmer, with a request for him to answer it, he being *the* authority on the subject.—*Eds. A. F.*]

Cultivation of Lucerne.

Editors of American Farmer:

As promised, I will give you my experience with my Lucerne in 1873. As you well know, we had a great drought last year. This was especially hard on my Lucerne from the fact that it was on a gravelly hill. The piece of which I write contains a trifle over 1¼ acres. We made our first cutting on the 14th of May, when the Lucerne was 2 feet 4 inches high. This lasted 45 head of Short-Horns 4 days. The weather being dry, the Lucerne did not grow very rapidly, but we cut it on the 14th of June; this was 2 feet high and lasted us 3½ days. If we had had our usual weather we should have expected to get several more cuttings, but the severe drought caused it to turn yellow and it grew very slow. In the fall it started up again, but with it came the crab grass that had got into the piece and had not got killed out by the drought. Our last cutting in the fall we made into very good hay.

The Lucerne is now looking well, and I am satisfied that with a favorable season we can cut it 5 or 6 times during the season. I planted on the 7th of May, 1873, about two acres of Lucerne, sowing it in drills 15 inches apart. This grew very well, but owing to the drought we were not able to cut it last fall. This year I am in hopes to get a large quantity of feed from these two pieces of Lucerne, and will report results to you.

Yours truly, CHAS. E. COFFIN.

Muirkirk, P. George's Co., Md., Feb. 15th, 1874.

[An article on *Soiling*, by Mr. C., is received.]

Excelsior, Peruvian Guano, &c.

I have been using Turner & Co.'s "Excelsior" for the last ten years, and in the meantime I have used several other fertilizers made in your city, also what I bought for pure Peruvian guano, and I can say that I prefer the "Excelsior" to any other by far that I have used. I am frequently asked if I think it is as good as Peruvian guano, and my answer always is, that I prefer it to what we buy now-a-days for Peruvian guano at the same price.

I have been recommending the "Excelsior" to my neighbors for several years, and yesterday I gave Messrs. Hopkins & Bro. an order to bring me, by the first vessel they had coming from Baltimore, 32 bags for myself and a few of my neighbors, and I think before the first of April I shall have occasion to order more.

Very respectfully yours,

JOHN J. BLACKSTONE.

Accomac Co., Va., Jan. 27th, 1874.

Ice-Houses and Hedges for the South.

Messrs. Editors American Farmer:

I wish you or some of your readers to give the readers of the *Farmer* some advice on building ice-houses, and saving ice. I built an ice-house this winter as follows: Dug a pit 20 feet long, 16 feet wide and 10 feet deep, on a small hill near a mill pond; walled up the pit with pine logs, then put in logs endwise at such an angle that the bottom of the house is only 3½ feet wide—these logs leaning against the top of the wall. I put logs in the bottom and pine shavings on them to keep the ice from the ground. I also filled the loft with pine straw and lined the house all around with straw before the ice goes in.

I have gathered no ice yet, but intend to place it in as nicely and compact as possible.

Now what I want to know is, do you or your readers think my house a good one for saving ice, and has any person any fault to find? if so, I will be glad to hear from them; I am inexperienced in the business and would be glad of advice.

I also want to find out where I can get some seed of plants that will make a good hedge. I saw in an agricultural paper 2 or 3 years ago something about Cactus being used in Alabama, but we have never tried any kind of hedging in this part of North Carolina. I want to experiment if I can get seed to start with.

I take the *Farmer* for agricultural information, and would be glad if you would give me the information asked. Yours truly,

Manchester, N. C. TAR HEEL.

[We should be glad to hear from any of our readers who can give any light on these subjects. This ice-house question is one it seems to us "no fellow can find out;" the successes and failures seem alike inexplicable. Some favor sandy, some clay soil, for pits; some ventilation over the top, others none at all. Large bulk and good drainage we should say *ought* to secure success, but one of the editors is frank enough to acknowledge that the house on his own place is fatally defective, though both these are secured.—*Eds. A. F.*]

Sending Fruit to Market.

To the Editors of the American Farmer:

I have been a grower of fruits for the market since 1848. During the whole period I experienced much difficulty in transporting them without injury, and to preserve the bloom and freshness of peaches as when first gathered. I tried the "*New Jersey peach basket*," and had to lay it aside, for it failed to meet requirements. I then resorted to the willow wine baskets found in the stores, and a country-made square split basket. These answered the purpose very well, failing only in affording a free circulation of air, a prime consideration even when a small quantity of peaches is placed in a heap. Here, I will remark, that the same means which promote beauty in appearance of fruits will also protect them from injury and decay. These properties can only be secured by ventilation, exclusion from the direct rays of the sun, and as low a temperature as practicable.

I have used the *Georgia crates* for the last two seasons, and am perfectly satisfied with all the trials to which I have subjected them. These have been numerous, sometimes with things not in purview of the invention. I have used them in sending cherries, peaches and pears to market, and to more fully test their strength and durability, have transported in them apples, potatoes and even geological specimens. I have yet to meet the first disappointment.

For cherries, a very tender fruit, when they are sent from the orchard for the purpose of "canning," the crates are a perfect success. Every one injured in transit should be rejected, for with the slightest bruise, fermentation (the first proof of decomposition) commences. I have used the crates in marketing Bartlett and Seckel pears in the height of their ripeness without even the precaution of wrapping each specimen with soft paper. Just so with peaches; my customers were entirely satisfied with receiving them in the crate, and only complained that I was not able to supply their demands. Taking into consideration the facilities for sending tender fruits to market the Georgia crates are indispensable.

I have made a large addition to my cherry orchard, and now have, perhaps, the largest and most choice collection in the State; and am making, also, additions of other fruits. I have never tried the crates for vegetables, but their adaptability to this purpose is without doubt. My trials justify my saying that they are, in some degree, "a blessing" to the fruit-grower, for they have never disappointed me in a single in-

stance on the merits claimed for them, and yet the cheapest, lightest, easiest to fill and handle, and most durable of any for the purpose I ever saw or have used. H. C. WILLIAMS.

Woodford Orchards, near Vienna, Fairfax Co., Va.

[We have another communication on the same subject, with especial reference to vegetables, which will appear in our next.—*Eds. A. F.*]

Our Agricultural Calendar.

Work for the Month—March.

Now the season for preparation has passed and the time for action has arrived. Work, and work in earnest, will soon be upon us, and it becomes every man to go into the spring campaign with earnestness and vigor, determined that whatever he does will be well done, and, as far as possible, done at the right time. He may not always be able to do this, but the resolve to try to accomplish it will be a long step towards it. We have not much space for a long exordium, so we proceed to matters which will first need attention.

Oats.—This is a crop which is cultivated in many cases in such a way that very satisfactory yields cannot be expected. It is a mistake, however, to grow it as though undeserving of good treatment—as, with a good supply of manure and the land in good order, it may prove remunerative, instead of, in many cases, a loss to the farmer. The cost of preparation, seed, harvesting, &c., being the same, it is folly to allow the oat crop to bring you in debt, and to avoid this unfortunate result on poor soils it is necessary to give a supply of sufficient and appropriate manure. We might name as suitable application, ten two-horse loads of barn-yard manure, with one bushel of plaster and two of salt; *or*, ten such loads of well-rotted compost mixed with a bushel of plaster and twenty of ashes; *or*, 150 pounds of bone dust, two bushels salt and ten of ashes; *or*, 300 pounds of a good super-phosphate. Either of these applications will bring a crop of oats in most soils, and also leave enough material in the ground to secure a set of clover. This we recommend to be sown with oats, and we should advise that orchard grass be sown at the same time; but of these plants we will speak more below.

Early Potatoes.—The earlier potatoes can be gotten in after the frost is out, and the ground can be plowed, the better in most cases. New soils or good sod land are generally considered the best for potatoes, which are large feeders, and must be liberally supplied to do their best. Where manures have to be applied they should be rich in their character and abundant in quantity, but not green and undecomposed. Manures of this nature are very liable to produce disease. We suppose no application equals well-rotted barn-yard manure, though salt, plaster, and especially ashes, seem to be peculiarly suitable applications for these tubers. It is an essential of success that the soil be well prepared; deep plowing and thorough pulverization are requisite to good yields. In preparing the seed it is well to cut the sets for early planting rather larger than those to be used later, and to roll them in plaster to dry the cut surfaces. If spread on a floor for a few days before planting it is also an advantage, the liability to rot being lessened.

It is said that early planting lessens the danger, or rather puts the plants more in advance, of the attacks of the Colorado beetle, a terrible enemy which it is much feared will this season show itself all along the Atlantic border. It behooves every farmer to attack them as soon as discovered. The most reliable remedy is Paris green mixed with plaster or flour, twelve to fifteen parts of flour or plaster to one of the green, and dust it over the vines. This mixture, it must be remembered, is a virulent poison, (Paris green being a preparation of arsenic,) and care must be taken in using it. In dusting the vines keep on the windward side and do not inhale the dust, and dust the plants while a dew is on or after a rain, so that the mixture will stick. The first insects that appear should be hand-picked, and their ravages may be thereby delayed.

We will give below a drawing of this insect in its perfect form and in its caterpillar state, in order that those of our readers who are not now familiar with it may at once recognize it if they are so unfortunate as to be visited by it.

The cut shows the perfect insect, and its larvæ or grub. The Colorado potato beetle, *Doryphora decem-lineata*, has *ten* black lines on its wing covers, five on each. The females of the first comers deposit their eggs on the under sides of the young leaves of the vines in clusters of from ten to twenty. The worms (larvæ) hatch out in a few days, feed voraciously from 17 to 20 days. They bury themselves in the earth; change into pupæ or cocoons, and remain in that state for some ten days, when they come out as beetles, ready to deposit their eggs for another generation. It will be seen, therefore, how necessary it is, in view of the amazing rapidity of their propagation, that they should be attacked the moment they are discovered to have made their appearance. We think the little figure will enable them to be known as soon as seen.

Barley.—This is another crop which ought to be gotten in early. Poor land will not raise large crops, and when it is seeded on soils of that kind they must be heavily manured. On good strong lands this is a paying crop, and we are surprised that more of it is not raised. About two bushels of seed to the acre is generally sown.

Clover.—This may be seeded now or at any time before the spring rains. If sown on a light fall of snow, as that melts it carries the seed down with it and into all the little fissures or cracks in the ground. Similar crevices, which are also left by the frost coming out of the ground, give a good chance to sow it as soon as it is dry enough, but the first rains close these up, so that the sowing must be quickly done; otherwise, it will be necessary to wait until the ground will bear teams, then the seed may be harrowed in and the ground rolled. In sowing clover seed

we have found Cahoon's broadcast sower a convenient little machine, and though some do not like it, with us it does its work evenly and certainly very expeditiously. The best harrow for putting in seed with winter grain is undoubtedly that of Mr. Thomas, the teeth being so inclined that while loosening and breaking up the soil they do not uproot the grain.

Orchard Grass.—The value of this grass seems to be every day more and more established. Scarcely an agricultural paper can be picked up but some writer is giving his testimony of its merits. In the south it seems to be highly successful. We commend a trial of it to our readers, who are referred to our remarks upon it in our last.

Root Crops.—Preparations for these ought to be begun, although it is of course too early to plant them. If every farmer, who keeps any cows or sheep at all, would raise a few roots for their use in the winter, we are very sure the satisfaction he would derive from seeing the enjoyment and the advantage with which they were consumed would make him a convert to the necessity of ever afterwards making them one of his regular crops, upon ever so small a scale. Far beyond their intrinsic value is the good they do in furnishing at the time when most needed a change from dry fodder to succulent and palatable food, health-giving and health-preserving. For the growing of roots, deep plowing and thorough preparation of the soil are essential. Make your ground rich, if possible, with perfectly rotted manure. Next month we will give some suggestions on *carrots*, *parsnips*, *mangels* and *sugar beets*.

Meadows and Pastures may be renovated, if moss and turf-bound, by passing a harrow over them in diverse directions, and by sowing 100 pounds of bones and five bushels of ashes to the acre upon them. A fine and well-rotted compost is also good. The use of a heavy roller is likewise to be commended; and this is, on grain fields as well, an implement too much neglected.

Making Manure.—Do not neglect this work, no matter what else presses. This is always a matter that demands attention. The accumulation, care and mixing of substances of manurial value is a subject to which we have frequently alluded in recent issues, and to refer back now to our remarks would not be amiss.

Corn Culture.—The corn plant is a gross feeder, and ranker manure is perhaps appropriated by it more readily than by any other of our cultivated plants. To secure a large crop, even on land in good condition, rich manure and plenty of it ought to be given. This not always being practicable, do the best you can, but bear in mind that there is more profit in raising a good crop on ten acres than half a crop on twenty. Besides the organic manures, such as barn-yard manure, compost, &c.,—the inorganic, like ashes, bones, plaster, salt, &c., are all eagerly devoured by this crop. As formulas for suitable application, where the materials are at hand and available, and for large crops, we suggest the following, with the addendum that where impracticable to give these, as large a proportion of either as is attainable may be used: First—20 two-horse loads of barn-yard manure, plowed in; then mix 100 pounds bone dust, ten bushels ashes, 1 of plaster and 2 of salt, broadcast it and harrow in. Second—20 two-horse loads woods mould or marsh mud, mixed with 10 bushels of lime, 10 of ashes, 1 of plaster, and 2 of salt, plowed under shallow. Third—500 pounds fish guano, 1 bushel plaster, 2 of salt, lightly plowed in, then harrow in 20 bushels ashes sown broadcast. [See also 'prize acre' in Balto. Co. Club report.]

Lime and Marl.—These may be applied with almost certain advantage on all our lands. We are not advocates of very heavy doses, and we believe that, except in soils very rich in vegetable matter, from 30 to 40 bushels to the acre of the former is a sufficient application to carry through an ordinary rotation, or double this quantity of the latter.

Tobacco Beds.—Look well to them. Top dressings of hen manure, plaster, or of guano, are to be recommended. See that they are kept well drained and free from weeds. A good paper on this subject was presented in the last issue of the *Farmer*.

Live Stock.—*Milch Cows* coming in should receive extra attention. Nutritious feed, daily slops, good bedding and occasional carding will all be found to pay. *Sheep.*—See that these have a supply of salt accessible. In-lamb ewes ought to have a small allowance of grain, and roots also, if you have been provident enough to grow them. *Work Animals.*—These, as the season for steady labor comes on, should have an extra provision of grain. Keep their stables clean and have them well curried. *Breeding Sows* ought to have warm quarters. An occasional bran mash or a mess of roots will be serviceable. Ashes and charcoal should also be given or put where they can help themselves. *Poultry.*—Have the houses cleaned and whitewashed. Provide new nests, and see that they have ashes, lime and fresh water constantly supplied.

Orchards.—Trim out the dead limbs on your trees, and cut off any interlocking branches. Wounds thus made on sound wood should be painted over. A good wash for the trunks and larger limbs of trees is whitewash in which a little carbolic acid has been stirred, say half a pint of the crude acid to a pail of the wash. To our eyes the wash looks better if deprived of its shining white by adding lampblack or soot. If you have not an orchard, plant one this season if possible. This is a work you cannot afford to delay. Select the varieties known to do well in your vicinity, make out your lists and order your trees at once; prepare your ground and be ready to set out the trees this spring, and our word for it you will not regret it. The instruction afforded in our report of the Pennsylvania Fruit Growers' Association, upon all matters pertaining to Fruit Culture, is invaluable,—being from men of practical knowledge hardly surpassed anywhere. That article alone is worth the cost of a year's subscription to the *American Farmer*, to every man, woman or child intereste l in the cultivation of fruit, large or small.

Fences.—Attend to these and make at once such repairs as may be needed.

☞The advertisement of LEWIS TUDOR & Co., Commission Merchants, was accidently omitted in our last. We commend this house to the attention of the public.

The Vegetable Garden.

March.—Work will soon begin to push you in this department, and it is to be hoped you have prepared yourself for it by a proper attention to those duties which could be performed in advance of the busy season.

Asparagus.—Seed of this may be sown, as soon as the ground is dry enough to work, in drills a foot apart. Plants from seed sown last spring may be set out. Put in good soil, in rows three to four feet apart, and plants one foot in rows and with their crowns about six inches below the surface. Give a good dressing of manure to old beds.

Beets.—Sow early in drills twelve or fifteen inches apart. Thin out so they will stand six or seven inches in the drills. *Carrots* and *Parsnips* the same.

Cabbages and *Cauliflowers* wintered over or from hot-beds may be set out as soon as the soil can be worked. Both need to be planted in rich soil and to be well worked.

Celery.—Seed should be sown as early as possible. Keep clear of weeds.

Lettuce, from the beds or cold-frames, may be planted out, and seed sown for succession.

Onions.—Seed may be sown and sets planted as early as practicable to work the ground. The seed sown thick will make sets for next spring's planting. The sets must be planted on good ground. It is not worth while to try to raise onions on poor land.

Parsley.—Sow seeds in drills a foot apart. It is well to help their germination by soaking in warm water. Keep the rows clean.

Peas.—Sow early sorts just as soon as you can work the ground. Make drills tolerably deep, say four inches, cover slightly with soil, and over this put fine manure. Stick those that need support as soon as they are two or three inches high. They take hold of the brush better.

Potatoes, also, ought to be gotten in early. The sets ought to be dusted with plaster, or put in a warm room for a day or two before planting. Some put them in a hot-bed to sprout.

Radish.—Sow in a light and good soil, as early as practicable, and through the season for succession. This vegetable, to be tender and crisp, must make its growth quickly; hence the ground must be mellow.

Salsify may be sown early in drills sixteen inches apart, in mellow soil. Keep clean.

Spinach may be sown toward the end of the month. That which was sown in the fall should be well cultivated.

Turnips may be sown as the ground can be worked.

Your hot-beds ought to be in order, and in them you may sow *Egg Plants*, *Tomatoes* and *Peppers*, to be set out in May. You may also start in this way *Melons*, *Squashes* and *Cucumbers*, the best plan being to cut square pieces of sod, turn them grass side down, and plant on them the seeds. When the season arrives to plant them out they may then be readily moved.

Rhubarb.—This may be had early by covering with barrels, around which plenty of manure should be piled. The whole bed ought to have a good application of manure made to it.

Seeds and Tools.—Have these ready and in order, that there may be no delays at planting time, or when the ground is ready to work.

Lawn and Flower Garden.

Floriculture, &c.—March, 1874.

By W. D. Brackenridge, Florist and Nurseryman, Govanstown, Baltimore county, Md.

Pleasure Grounds and Flower Garden.

South of where we write the early part of the present month is a proper time to remove and plant deciduous trees and shrubs; while in Maryland and northward the end of the month and beginning of April will suit better. In the performance of this work two requisites are essential to success: the first is in taking care when lifting that as many of the fibrous roots be preserved as possible; and the next is, to see that the ground to be planted is deep, well drained and friable enough in texture, that it can be worked in closely among the roots, but not pounded as tight as a brick around them; a firm tread with the foot is all that is necessary, raising the earth a few inches higher over the roots than the adjoining level, allowing that much for subsidence.

At the present day there is a great mania for fast-growing shade trees that are not subject to send up suckers from the roots, and to meet this demand we know of nothing superior to the *Populus Angulata*—Carolina Poplar: a tree of erect habit and rapid growth, making in rich land a height of five to six feet every year. We know some trees of it planted when six feet high, in 1860, that are now over fifty feet in height, and the petioles of the leaves being flattened vertically, the latter are kept moving under a very gentle breath of air. Such trees planted near dwellings, from their pyramidical form, give great relief to a Mansard or other square building. Another most desirable tree, of rapid growth and very broad foliage, and bearing spikes of fragrant flowers in spring, is the Chinese Paulonia Imperialis, which we have known to make a growth sixteen feet in height in one season. It is much and justly esteemed as an article for shade in the south and middle States. Following these two, the Silver-leaved Maple and Catalpa, though of slower growth, possess many good qualities to recommend them.

If we were asked to select one dozen of flowering shrubs for a suburban garden, we would choose Pyrus japonica, Forsythia viridissima, Deutzia crenata flora pleno, D. Scabra, Spiræa Revesii flora pleno, and do. single, S. prunifolia flora pleno, with S. aurea, Wigelia rosea and W. amabile, Philadelphus grandifloras, large flowered Mock Orange, and to make a baker's dozen, add a white and purple Lilac, without which no garden is complete. And then we would suggest a clump of double Pæonias, of various colors; also, a bed or border filled with hardy herbaceous plants, consisting of Delphinium formosum and D. sinensis, Dielytra spectabilis, (the Bleeding Heart,) Campanula (Wahlenbergia) grandiflora,

and C. persicifolia flora pleno, Achillea Ptarmica flora pleno, with several varieties of Phlox of various colors, including white and striped; and in a shady place, where the ground is rich, we would have patches of white and blue-flowered Funkias, not forgetting the good old Hydrangea hortensis, and as a partner to this a single plant of the gorgeous H. paniculata grandiflora, and, should space permit, a bed filled with Liliums, as L. tigrinum, and our meadow species, L. superbum,—these will give more satisfaction, with ordinary care, than the famed Japanese sorts. To all this array can be added, in the summer season, Petunias, double and single, Zinnias, do. do., Marygolds, Asters, Portulacas and a few Cannas, some Castor-oil plants and Dahlias to crown the whole. If a nice, cheap, pleasant arbor is wanted, we would recommend Mrs. Jane Boswell Moore's method of getting such things up, as given on page 389 of last year's *Farmer*, as well as to what its surroundings should consist of.

It is no economy, in making roads and walks, to omit laying a good strong bottom of broken stones or oyster shells before finishing with gravel; that is, if the roads are intended to be permanent. It will be found that a little labor and cost expended in making is ultimately money saved.

In laying down new Lawns and grass plats, the soil should be well enriched and trenched or subsoil plowed to the depth of twelve to eighteen inches, and this operation should be performed to a regular depth, so that when it settles the whole surface may be found level. In seeding down use a mixture of two-fifths red top, two-fifths Kentucky blue grass and one-fifth white clover seed, which, after being lightly raked in, should have the roller passed over the whole. All this work should be performed when the ground is dry and the air calm.

All out-door pruning should be finished without delay; also, plants in the cold frames examined, and air admitted to them freely, as the weather moderates.

Hot-beds should now be made up in some sheltered spot, in which to start Dahlias and sow seeds. A heat sufficient for this purpose can be got up by a bed two to three feet deep, composed in about equal parts of fresh stable manure and leaves from the woods, well incorporated. On this bed the box-frame and sash should be placed, and inside, on the surface of the bed, four to six inches of light earth be spread, on which seeds may be sown, and by adding sand to this earth, it can be used also as a cutting bed; but during cold weather the glass will have to be covered with mats.

Green-house.

Don't lose sight of the wants of the inmates of the green-house and conservatory, by being at this season overmuch absorbed in out-door affairs. The truth is, there is more work required to be done among green-house plants during March than any other month in the year; for there are plants to start into action from a dormant condition; others again, that have exhausted themselves, have to be set aside to rest, or rejected altogether; while the numerous new additions from seeds and cuttings have to be provided with place and nourishment, and a sharp lookout to be kept, so that insect life don't gain the ascendancy over that of the vegetable, as well as to watch that the stronger plants don't choke the weaker ones; therefore, re-arrange the whole often, and this will, in a great measure, prevent the specimens from becoming lop-sided.

Bulbs of Amaryllis and tubers of Gloxinias, Achimenes, Gesnerias, should have the old earth shaken from them, and repotted in a rich light compost, after which they should be placed in a warm situation, watering them very sparingly until such times as they begin to show signs of growth.

Sow seeds of Salvia splendens, Mignonette, Maurandias, Cobea scandens and other tender plants; use as a covering, light sandy earth, and by placing them in a partial shade they will vegetate much sooner; when fairly above ground they should be moved to where there is light.

Such plants as Clerodendrons and Bouvardias are easily propagated by short cuttings of the roots, placed head up, in sandy earth; the majority of Acacias can be multiplied in the same way.

Having last month thrown out a few hints on the growth, &c., of the terrestrial section of Orchids, we shall now touch on that section denominated Epiphytal, or such as are known as air plants. In variety they number thousands, and for the most part are found growing within the tropics. All are singular in the form of their flowers, some of which bear a resemblance to a nest of young pigeons, others to the butterfly, the bee, the stork, &c. At night, particularly, the fragrance of the flowers of many species is truly agreeable, and, in many instances, refreshing. Of these are Tetrapeltis fragrans and Epidendrum aromaticum.

Many people suppose that these plants are parasites; that is, their roots penetrate the bark of trees and subsist on the sap of the tree; but such is not the case, they merely cling to bark of trees and rocks by their somewhat papery-tissued roots, the extreme ends of which have a glossy green appearance. In their cultivation they should not be potted in earth, like fibrous-rooted plants; but placed in baskets or pots filled with round pieces of charcoal, cocoanut fibre, or black mud that has become so hardened that you can break it up like oil cake; any of these substances mixed with decayed Sphagnum will grow them, provided the receivers are filled above the brim with the above named materials, and the plants so placed that the roots can run over and cling to the nodules. Many kinds grow well when placed on blocks of wood suspended, on which the bark has been retained. A partial shade, with a humid atmosphere impregnated with ammonia, in a temperature ranging from 60 to 80 degrees, suits the majority; but many of the kinds are much easier managed than others—of these are Dendrobium nobile, many species of Cattleya, Epidendrum and Oncidium.

W. D. B.

Horticultural Exaggerations.

Messrs. Editors American Farmer:

Growers of new varieties of fruits and flowers are apt to over-estimate the value and beauty of their pets, and the result is that our catalogues of fruits and flowers are crowded with sorts of no particular value. In flowers this evil is particularly manifest. Good old varieties of

flowering plants are thrust aside for varieties described by their growers as "superior to all others now grown." The English florists excel in this, and gull us poor Jonathans to their hearts' content, since such is the general diffusion of horticultural news in this day, that we must purchase for the American market any floral novelty that our English cousins brag about, no matter what the cost. An instance in point is the new double white geraniums, two varieties of which were brought out in Europe last year, and were bought by English and American florists at high prices, one variety selling in this country at $10 each for small plants. Upon blooming them we find they are neither one of any account; the first one introduced, called "Alba Pleno," is a poor bloomer, a ragged flower and not entirely double. The second, "Aline Sisley," is a better bloomer, a smoother flower, but very little more than a single flower. A few years hence these geraniums will be thrown out of the gardens of those who desire to grow choice flowers. A few years ago a good deal of fuss was made over a new geranium called "Reticulatum," described as "a unique and beautiful variety of the Nosegay section, with leaves elegantly netted or traversed during winter and spring with golden veins upon a green ground, and throughout the dry summer months finely marked with a tracery of green net work upon a golden ground." Now how will that do for a description of a miserable little specimen of what our mothers used to call a "Fish Geranium." We have grown this "gem" for several years, and have never yet seen any of the "*golden veins*" or "*delicate tracery*;" nothing in the world but a "fish geranium" of the style of forty years ago. Yet the above description is copied verbatim from a gorgeous New York catalogue for 1874, where it stands from year to year since it was copied from the English description, although the publisher of the catalogue knows the description to be false. Thousands of people annually look to the catalogues of the prominent florists for correct information concerning novelties in plants, and the compilers of catalogues should use great care to eliminate all varieties which have proved worthless after trial, and then make their catalogues lists of reliable descriptions. Another case in point is a plant of American production. The rose "Bella" was sent out a few years ago as a *white* Tea rose surpassing all others grown, &c.

We have had this rose several times from head quarters and have never seen a *white* flower on it yet, although we have grown thousands of plants. The color with us is a pale greenish lemon yellow, a very pretty flower, but a feeble delicate grower. It should never have been sent out as a *white* rose. It is described as "free from mildew;" with us it mildews desperately.

A year or two ago we were promised a new crimson ever-blooming climbing rose in "James Sprunt" or "Climbing Aggrippina." We have grown this in large numbers too, and our experience is that the old Aggrippina that never was accused of *climbing* will make shoots in the same soil twice as long as "*Climbing Aggrippina.*"

We have one plant of "James Sprunt" in a rich greenhouse border, which, after two seasons growth, has attained the surprising height of eighteen inches; when it will get on the rafters I won't pretend to calculate.

The English florists, in their anxiety to raise flowers of new and astonishing colors, have rapidly become color-blind. Now-a-days, when an Englishman grows a pink geranium he is almost certain to call it blue or *mauve*, (ask a milliner what color that is!) so that we have now in the catalogues "Blue Gem," "Blue Bells," "London Blue," &c.—all pink geraniums.

But enough of exaggerations. The catalogues of all our florists are replete with varieties that are not humbugs or exaggerations, and the instances cited are but a few errors that have crept into a mass of truthful descriptions. Our American catalogues we believe are far more accurate in their descriptions than the foreign ones, and most of the errors and exaggerations in our catalogues are caused by copying the foreign descriptions.

In a future article we hope to have an opportunity to tell of some plants, both new and old, whose beauties no description can exaggerate.

Riverbank, Chestertown, Md. W. F. MASSEY.

Farmers' Meetings, &c.

Maryland State Agricultural Society.

The first regular meeting of the society for 1874, was held at the rooms in this city, on 5th ulto.,—A. B. Davis, Esq., President, in the chair.

Gen. Stewart made a report from the committee appointed at the previous meeting, to prepare and present to the legislature a memorial for the passage of such acts as will aid and benefit the farmer on the following subjects, viz: Vagrant stock, sheep husbandry, immigration and county roads. The memorial was read and approved, and the committee enlarged, to present it to the legislature, (which duty was subsequently performed.)

The Executive Committee, on motion of Gen. Pearce, of Baltimore county, was requested to confer with the several county societies of Maryland, with a view to arrange the exhibitions of said societies, so as to prevent conflict of time; and that for this purpose those societies each appoint five delegates to meet the State society at its monthly meeting, on the first Thursday of April.

A resolution was offered by Mr. Sands, and adopted, to consider the proposition presented to the city council by Mr. Loney, to utilize the night soil and garbage of the city as a manure for land, which is in harmony with the suggestion of Prof. Hallowell, in the essay read at the last meeting—and a committee of five was appointed for the purpose, to report at the next meeting, viz: Samuel Sands, N. Popplein, Dr. M. Merryman, Chas. Ogle and D. Lawrence.

Mr. J. R. Clark, of Howard county, offered a resolution, which was adopted, approving of the plan for the increase of farm labor, proposed by the trustees of the Maryland Agricultural College, and so strongly recommended by Gov. Whyte in his late message to the legislature. [The president, Mr. Davis, who is also president of the college, remarked that the plan spoken of in the resolution is that of fitting up a building

at Rossburg and owned by the State Agricultural College, and using it as a stopping place for English emigrants. These emigrants are generally willing to stop in Maryland, but they are pushed through to the Western States before the farmers of Maryland could see them. This leads to a constant want of good farm hands which has been long felt in Maryland, and it is thought that English emigrants make the best farm hands. If this old building was fitted up and the emigrants allowed to stop, there would then be no difficulty in procuring good and skilled farm hands at a comparatively small cost.]

Mr. Dickinson Gorsuch, of Baltimore county, presented a resolution for the offering of a premium of $100 for the best ten acres of corn grown in the State, which was referred to the Executive Committee.

A motion was made inviting the Horticultural and Poultry Associations to co-operate with the State society. Mr. J. D. Oakford stated that it was possible, if some inducement was offered, the great National Poultry Show for this year might be held in Baltimore.

Mr. Rieman moved that the Association be tendered the use of the fair grounds at Pimlico, and promising the co-operation of this society, which was adopted.

A motion was made that the monthly sessions of this society be held at 12 noon, instead of at night. After considerable discussion it was dissented from. Subsequently it was proposed that the meeting for March be held in the day-time, which was adopted.

Dr. Merryman, of Baltimore county, offered a resolution asking that a committee be appointed to arrange topics for discussion at monthly meetings, the readings of essays, delivery of addresses and reporting new business for the consideration of the association. The resolution was adopted.

The president stated that he had placed the following gentlemen upon the Finance Committee: Gen. George S. Brown, Wm. Devries, Joseph H. Rieman, Jesse Slingluff and Josiah L. Johnson.

The society then adjourned.

Baltimore Co. Agricultural Meetings.

Meetings have been held during the past month in several of the districts of the county, for appointing committees to prepare and present to the Legislature of Maryland memorials for the enactment of laws for the protection of sheep from dogs, on county roads, vagrant stock, &c. Our limits will barely permit us to allude to these matters, and before the next issue of our paper is received the Legislature will have nearly finished its session and the several subjects disposed of. We shall in due time give the results of the legislation on such subjects as may be deemed of general interest.

LOWER GUNPOWDER CLUB.

A new club in 11th district of Baltimore county, has been formed under this title. At the meeting held on the 24th January, the following officers were elected: Dr. Walter T. Allender, President; William Gambrill, Secretary; John Milke, Treasurer, and Messrs. E. F. Raphel, J. B. Bowerman and Wm. H. Merrit, Executive Committee.

The President, on taking the chair, addressed the Association, as follows:

Gentlemen:

"As you have decided upon the form of the association, its name and organization, (appreciating the position in which you have placed me, and acknowledging that he whom you have placed *first* should be servant to you all,) I propose to draw your attention to the several advantages likely to arise from co-operation. First: Discussion of various topics by the members at monthly meetings. Second: the holding quarterly fairs for selling or exchanging cattle, agricultural products, implements, merchandize, &c. Third: the establishment of a cheese and butter manufactory. Fourth: a steam apparatus for drying fruit and vegetables. We can start one or all these establishments on a scale to suit our moderate requirements, and, as we stimulate improvements, enlarge them as necessity demands. The more cattle we can profitably keep, the more rapidly will we improve our lands. Vegetables, grain, fruit and milk make heavy demands for manure, and we shall find it always more or less profitable on our poor lands to use certain fertilizers to eke out our deficient manure heaps, or for specific application. As we improve our lands we will require more labor. As this matter of labor agitates the minds of farmers and philanthropists, its solution depends on the value of labor. Instead of trying to reduce wages, let us rather try, by producing larger crops, to increase wages,—endeavoring at the same time to raise the laborer in the scale of humanity. Willoughby Newton contends it is not labor, but rather capital, that is required. Certain it is, high wages will draw laborers and low wages drive them away. Then let us endeavor, by comfortable homes and wages enough, to keep them comfortable. A new era is opening for our laborers. Human, gregarious, they will seek either the meeting-house or grog-shop. We ourselves, as farmers, isolated, are in some respects like our laborers, and will be benefitted by meeting together to discuss the theory and practice of our art—instructing one another—by uniting our means, building up markets nearer home—enriching our lands, making more manure, employing more help, paying better wages, building school-houses and better tenant-houses, abolishing the tempting groceries;—thus rendering our laborers, as well as ourselves, more comfortable. We hope these means will lessen pauperism,—if successful, entirely abolish it in our county.

BALTIMORE COUNTY GUNPOWDER CLUB.

To the Editors of the American Farmer:

The last regular meeting of the Gunpowder Agricultural Club was held 31st ulto., at the residence of W. W. Matthews. J. M. Price was chosen foreman. The session was largely taken up with matters of business, viz: annual election and reports of a number of committees. For officers the present incumbents were chosen again. A standing committee, consisting of D. Gorsuch, J. M. Price, Ed. Scott, Jno. E. Matthews, A. C. Scott, was appointed to attend the monthly meetings of the Maryland State Agricultural and Mechanical Society. The hope is entertained that farmers and farmers' organizations will awake to the importance of sustaining the vigorous efforts now being made to resuscitate

the State society, and to infuse into its veins freshness and strength drawn directly from the practical agricultural classes. It is a nucleus which, with proper support and encouragement, promises the best results to the farming interests of the State.

The committee on the prize corn acre made their final report. T. T. Gorsuch had grown on one acre 24⅔ barrels, I. M. Price 23, Jos. Bosley 21¼, J. M. Gorsuch 19. They awarded the prize to T. T. Gorsuch, and recommended the continuation of the competition for the coming season. For his test acre T. T. Gorsuch had selected a clover and timothy sod of two years' standing, located on high ground; had broadcasted with eleven cords of stable and yard manure two weeks previous to plowing; had plowed two weeks previous to planting; harrowed and top-dressed with eight cords of rich earth and yard scrapings mixed, spread broadcast; rows were run off three feet nine inches apart; plowing was done 1st of June; hills eighteen to twenty inches apart in the rows; had attempted to scatter chicken manure in the rows, but succeeded only in part, a high wind interfering with the operation. Corn was bodily taken by worms and ants; replanted 15th June. First and second workings were given with cultivator and hoe; third with double shovel; fourth with cultivator. A fifth working had been prevented by a heavy storm, which blew the corn down; in fact, it was blown down in all five times. It had been set up four times, but as the fifth blowing down caught the corn in the silking period, the acre was given up as a failure.

Jos. Bosley had not planted for one acre, but for four. The ground was a repeat from last year. It was lightly manured, and a crop of rye sown in the fall for pasture was plowed in. Planted May 27th, both ways, three feet nine inches one, two feet the other; was worked once with the smoothing harrow and twice with the cultivator—the cheapest working of any he had. Turner's phosphate had been used in the hill before dropping.

The experimental committee on fertilizers reported that eight different varieties had been tried; at present the Whitelock makes the best show, though owing to its fine state for application it had fed from the drill more freely than the rest.

After the reports had been heard, the exercises appropriate to the occasion became the order, viz: the reading of selected articles on agricultural topics. The first read was from the pen of Col. Waring, on deep and shallow plowing. In it the author makes no concealment of the uncertainty in which he finds himself placed in regard to this subject. This confession struck our members with surprise; they considered the policy of deep plowing well established; one not to be seriously questioned. In the discussion it seemed to be conceded that plowing to the depth of five or six inches, with effective subsoiling, might be more desirable than ten or twelve inches without; at the same time, as no one was willing to admit that an efficient subsoil plow had yet been introduced, there was no inclination manifested to abandon established principles.

W. W. Matthews selected an article on salt and its uses.

S. M. Price had an article read on the subject of feeding as a policy of permanent improvement. This led to a discussion on the durability of stable manure as applied to various crops.

A. J. Gent read the address of Mr. H. C. Hallowell, delivered before the Montgomery County Agricultural Society. The address was greeted with frequent applause. It is full of cheering and sympathetic words for the farmer. The author is imbued with an unmistakable love for his profession as such, and does not calculate its advantages solely in accordance with a pecuniary standard.

Baltimore County, Feb. 10th, 1874. T. G.

[The reports of Mr. S. M. Price and J. M. Gorsuch, the other competitors for the corn premium, had not been handed in.]

Baltimore County Farmers' Union.

A meeting of the association was held early in February upon business relative to bills before the Legislature. Another meeting was called for the 14th at Reisterstown, the result of which was the determination to form a club in the vicinity auxiliary to the Farmers' Union. The meeting was organized by calling Mr. B. M'L. Hardesty to the chair and Mr. T. Gorsuch the secretary of the Farmers' Union as secretary of the meeting. There was a large attendance of the most substantial farmers of that rich section of the county, and subjects of considerable local interest were discussed; among them the extension of the city limits, county roads, &c. The chairman announced that the meeting had been called at the instance of the Farmers' Union, but as its purpose was the organization of a social auxiliary association, there would be no formal meeting of the union. After some informal discussion of the matter, the meeting was organized as a Local Farmers' Union, with Mr. Nicholas as president and Edward Worthington as secretary.

Considerable discussion was had in regard to the management of the public roads of the county, in which Messrs. Hardesty, Harrison, Cockey, Dr. Merryman and others participated.

L. L. Conrad, Esq., was then introduced to the meeting, when he discussed at some length the social, material, moral and mental advantages of the farmers' organizations. He traced the origin of the farmers' movement at the west to four clerks in the Agricultural Department at Washington, and detailed its rapid growth in Illinois and throughout the west.

King George, Va., Agricultural Club.

To the Editors of the American Farmer:

The regular meeting of the King George Agricultural Club, held January 29, 1874, at Cedar Grove, (the residence of our President, Dr. Richd. H. Stuart,) was well attended by its members, including Major Robert W. Hunter, of the Virginia House of Delegates, our visitor, who gave the club much comfort by assuring us we had many friends in the Legislature.

Reports from committees being first in order, Major Rogers made the report on "Canning," the residence of Capt. Wm. Taylor Smith, which was favorable, just and encouraging; ordered entered on the journal and printed.

The subject for general discussion was fruit, but in consequence of Mr. Brown's absence, who has made that subject a specialty, and promised an essay, the club agreed to postpone it until the next meeting.

Resolved, That the thanks of this club are hereby acknowledged to be due to the superintendent of agriculture, Hon. Fred. Watts, for the seed received from his department, with the assurance that its donations are distributed so as to attain the best results.

Resolved, That the report on road law be referred to the committee, Messrs. Tayloe, Brown, Smith and Rogers, with instructions to revise the same and forward a copy to the delegate of this county and senator from this district, praying the prompt action on it of the General Assembly at its present session.

A pamphlet on the subject of guano was read, showing the inability of legislation to check the fraudulent manufacture of manures,—which gave rise to an animated discussion among the members, who thought differently, and came to the conclusion that it was high time our legislators, especially those who were farmers themselves, should take some steps by which we can be protected from the imposition of fraudulent dealers in artificial manures.

The inspectors on this estate regarded the wheat as looking most promising, and the best that had come under their notice, and the general appearance of the estate in all its departments showed by improvements that our president "mastered the situation," and that we may profit by his example.

Ordered, That the subject of fruit be continued, and the cultivation of potatoes be also a matter for the deliberations of the club.

Ordered, That the next meeting be held at "Farley Vale," the residence of Major J. D. Rogers, on the last Thursday in March.

Our president, after all business was dispensed with, invited the club to his hospitable table, on which was served up, in the most approved Virginia style, every thing to tempt even the most fastidious. A magnificent saddle of mutton embellished the table, which cannot be surpassed in any section of the State, and *was not* stall-fed. Maj. Hunter said if any thing would make a Legislature pass a good dog law, that saddle would ensure its passage. 'Tis useless to add that this sumptuous dinner was freely discussed, with an amendment now and then of Mrs. S.'s delicious domestic wine. The club bid adieu to our president, with the hope that he may live yet many years.

"E. T. T.," Sec'y.

Report of Committee on Dairies.

The committee appointed by the *Montgomery Farmers' Club* to investigate the dairy interests of the county, respectfully submit the following report:

It has been our aim to visit a sufficient number of dairies in the central portion of the county to obtain a general idea of the most approved breeds and feed for butter, and the best method of manufacturing and marketing the same.

In order to show the basis of our conclusions we will first give our notes from several of these dairies.

Charles Kirk made last year over 1,000 lbs. of butter, and this year so far (August 1st,) about 900 lbs. Milks 12 cows. Best average around at any one time, including heifers and strippers, 5 lbs. per week. They have a large family of boarders during summer, materially lessening the aggregate yield. He feeds a gallon of middlings, costing 40 cts per. bushel, to each cow daily during the milking season, and thinks feeding very necessary.

The butter is served weekly to customers in Washington at 50 cts per. lb.; and is believed to pay well.

He has one grade Alderney which is highly valued. Says the butter loses color immediately when she stops milking.

The spring-house was an unusually long distance from the dwelling, but the water is cold—standing at 52°—and the butter was firm, yellow and sweet. Stone pans are used without covers. The churning is done twice a week. The butter is washed with cold water and worked twice before printing. It is printed in half lb. prints, wrapped in cloths and placed in a square poplar box with shelves, with capacity of 60 lbs. A zinc box slides down in the middle of this, in which ice is placed during warm weather. In this way the butter reaches its destination in prime order.

Granville Farquhar milks 10 cows, most of which have been milking since last spring a year. Rather likes the plan of having them go over without calving. As they now have a family of 30, there is but little butter for sale. He washes and works twice; markets the same as Charles Kirk, at 50 cts.

Roger Brooke makes from 20 to 40 lbs. per week, from 8 cows. Goes to Washington and returns same day; gets 50 cts.; thinks it pays to feed bran. R. B. Farquhar's wife prefers dairying to house-keeping. Roger thinks it pays better than other branches of farming; he milks with help. Thinks the confinement of the milking business the principal drawback. His wife skims and prints. Milks 8 cows. A grade Alderney heifer is one of his best; butter gets white when she goes dry. He markets from 30 to 40 lbs. per week. Says meadow grass is more fattening than upland, but makes lighter-colored butter. Prefers bran to meal for milk cows. Does not milk in mid-winter. Skims once a day; uses ice in churning.

Charles Beale milks 6 cows, which sometimes average as much as 8 lbs., though 5 or 6 lbs. is more common; feeds ½ gal. of a mixture composed of 1 part of white meal to 2 parts bran daily to each cow. Thinks white corn meal far preferable to yellow for milk cows, the latter being too fattening. He does the milking; his wife skims and he makes the butter.

Wm. M. Moore milks 8 cows; they were fresh in the spring. Feeds a gallon of meal and bran in equal parts to each cow every day. Temperature of water in spring-house 54°. Milks himself and helps make the butter; averaged nearly 8 lbs. per. cow for 4 weeks in June. A family of 12 use milk and cream. Averaged about 38 cts. per lb. at home; thinks butter at 35 cts. more profitable than grain crops. Has mostly native stock, but thinks well of some Alderney blood. Has tried permanent pastures, but would discard them.

Henry Hallowell does not profess to keep a regular dairy, but raises all his calves and milks the heifers until they are old enough to command a good price for milk cows; made the past year 950 lbs. from about 7 cows.

It would seem from these notes that dairying on a small scale, where farmers help with their own hands, and most especially where their wives prefer dairy work to housekeeping, does pay handsomely.

In addition to the direct profits of butter, a number of those in the business mentioned particularly the indirect profits arising from sales of other products effected while delivering the butter.

Also much value was set upon the pork and manure made on dairy farms. All agree that it pays to feed, and a mixture of bran and meal is advised. All who have tried Alderney blood think it an advantage. Most all wash their butter, and work twice before printing.

All but one have their cows to come fresh in spring. Those who market their own butter get 50 cts. per. lb.

[FURNISHED TO THE AMERICAN FARMER.]

Notes from the Secretary's Book of the Proceedings of "The Farmers' Club of Sandy Spring, Md.," for the year 1873.

This being the thirtieth year of our existence as a club, we note an average attendance at the twelve meetings of thirteen members, out of sixteen. (Each year of the thirty has had its full twelve meetings.)

The first item in the record, worthy of being copied, is a reference to the successful operation of a hennery. The member who adopted the plan of enclosing his fowls instead of his garden, thus protecting at once the vegetables of the garden, the flowers of the lawn, and various things about the barn, still regards his experiment as successful.

Our club killed 140 hogs, whose average weight was 195 pounds.

The manure of cows is estimated at one-half the value of horse manure; but where the cows are fed with chop, the manure is worth one-third more than on long food.

Hay being now worth seventy-five cents per cwt. more than corn, very little is used at home.

As fertilizers for wheat, general preference is given to Bond's I. X. L.

On the 30th of January, 1873, the thermometer varied from two degrees above zero at C. Stabler's to twenty degrees below at G. E. Brooke's.

The average yield of oats was 18 bushels, and of wheat 19¾ per acre,—(this was for 1872.)

The idea of planting chestnuts was approved. Comparing chestnut and white oak for posts, eleven members gave preference to the former and two to the latter.

A standing premium of $20 is offered by B. R. Roberts to the man that raises 100 bus. corn on an acre. No one called for the premium.

It was considered our duty to notice several large holes in a certain barn door; also, a missing step in the stairway, &c.

[This item will show how minute are the examinations, and the reports thus made are calculated to induce greater carefulness even in the smallest matters.—EDS. A. F.]

For hill-manuring of corn, use Excelsior in the hill, ashes and plaster on top *after* the corn comes up.

At the meeting held 1st of June, at S. P. Thomas's, we find recorded: "The growing wheat was luxuriant, as might be expected, since 1,400 pounds of Bond's I. X. L. had been applied in two dressings, (one on potatoes preceding the wheat.) Our host has got hold of the right lever for elevating agriculture, viz: plenty of manure." Now we take pride in stating that said wheat yielded 42 bushels per acre—the largest wheat production known hitherto amongst us.

Two fine colts of Percheron stock elicited much comment and commendation.

At the same meeting the question was asked: "What are harvest wages to be this year?" After some discussion, it was agreed that our club should avoid the appearance of combination to regulate wages.

Most members prefer to mix all manures with the soil for wheat; three adhere to the plan of top-dressing in all cases.

The subject of "Farmers' Granges," first coming up in the July meeting, various opinions were expressed; but it was agreed that we did not know enough about the matter to judge of it fairly.

It will do to sow rye till the ground freezes.

The most effectual way to kill briars is to cut twice, once in June and again in August.

At E. C. Gilpin's a Cotswold buck was much admired; weight, 275 pounds; fleece in three successive years, 18, 16 and 14 pounds respectively.

Five members had ice middle of September. The question of the best way to construct ice-houses, which comes up from year to year, still baffles the wisdom of our club. The only point in which all agree is, that ice keeps best when a large quantity is massed together.

Southern Agriculture.

To no planter in the South, is the country more indebted than to *David Dickson*, of Georgia, who was among the first to put forth the energy requisite to resuscitate the agriculture of his section. Originally a merchant by profession, when he gave up his business in the city to assume the proprietorship and management of the poor lands which belonged to a paternal estate, he was not afraid to make a venture in the purchase of the supplies upon which his success depended, but spent thousands of dollars in fertilizing materials, for the manufacture of manures for his own farms, and found his profit in the expenditure. Our old *American Farmer*, and the *Rural Register*, then published by one of our firm, were his favorite journals; and to the many enquiries about the *modus operandi* of his success, he uniformly insisted upon his enquirers subscribing for our paper, and in person received the orders for many subscriptions which he forwarded to us.

Mr. Dickson has published a work on "*Practical Farming*," embodying everything necessary to instruct the young or old in the best modes of obtaining success in their operations—from which, at the present time, we will make an extract on his manner of managing the COTTON crop; and we would here remark that his system of Rotation, and the reasons for it, embrace, as in a nut-shell, the whole theory which science and practice have proved to be the *ultima thule* of the most recent discoveries in the art of Culture:

I would have a permanent pasture; one field should rest, one field should have cotton, one corn, and one small grain. I would put in cotton after rest, corn after cotton, small grain after corn, and rest after small grain. If you only have five fields and wish to keep up the vegetable mold to a desirable standard, sow peas after the crop is off, always using commercial fertilizers as the most desirable in all kinds of farming. *In using commercial fertilizers you should not overlook the point of saving home manures.* The more manures bought, the more home manures should be saved and applied to the farm.

One of the objects in the system of rotation of crops recommended, is seen from the fact that all plants do not receive the same kind of material from the soil; one kind draws more phosphate and another more ammonia, and some draw very little of either. If you were to plant one kind of crop alone you would soon exhaust the land of that particular kind of nutritive element required. I would let the land rest in order for it to accumulate vegetable mold, and to make it produce more annually than it would without rest, and thus save labor. The vegetable mold would keep the land open and porous and soft, so that the roots could penetrate through it.

I would plant cotton after rest, because the land is then in a better condition for the cotton, there being no cornstalks in the way, and less crab grass, the land having been covered up to obstruct its growth. Experience has also shown that the land, when cultivated in cotton after rest, will produce a healthier weed, and will retain water better to keep the guano soluble. The vegetable mold darkens the soil so that it will receive the heat better and keep it up better during the twenty-four hours. It does not throw the reflection of the sun back on the plants to burn and scorch them. The vegetable mold in the land from rest is becoming soluble the year round, and during the growth of the crop is becoming soluble; and when partially decayed it acts like a sponge in holding the water and letting it out gradually to the roots of the plants. If there should be a surplus of water, it leaves the land porous enough for the water to pass through into the sub-soil and prevent its damaging the crops.

[Referring to preceding numbers of our *Farmer*, for best manures for Cotton, and its cultivation, we must be content for the present with the above extract, but will follow it up hereafter with further quotations.—*Ed. Am. Far.*]

Green Crops as Manures for Tobacco.

At a recent meeting of the Franklin Harvest Club, held at Springfield, Mass., a discussion on the culture and sale of tobacco was held.

Dr. Riggs, of Hartford, a man of science as well as a practical farmer, gave his twelve years' experience in the cultivation of tobacco. He claimed, as he has done for years, that green crops and vegetable matter plowed in, was the most economical fertilizer; and that his own plan in raising tobacco, was to sow rye after the tobacco was harvested, and plow it under about the first of June when the rye is 6½ to 7 feet high. By this rotation he had raised ten continuous crops of good tobacco, and the land had been constantly improving. The cost of the rye crop as a fertilizer, was small; and its great virtue was the chemical action in the soil when plowed under, especially in developing the potash in the soil. Besides the rye, he put on the land for tobacco crop, about $25 worth of barnyard manure, and $25 worth of guano with a little superphosphate in the hill; the whole cost of fertilizers per acre was not over $55. Dr. Riggs claimed that if he had spent the same amount in barnyard manure alone, it would not fertilize more than one-fourth of an acre sufficiently. He said decomposed vegetable matter was the best fertilizer; clover roots were the most valuable, and rye next, as a green crop; but it took longer (two years) to get the clover. He advised keeping the land continuously covered with some crop, which would enrich the soil by accumulating nitrogen as forests do; and any farmer could understand the principle by the effect on soil covered by a board, or mulched; it became richer.

Prof. Johnson gave some very plain and practical hints, and said that one great advantage of Dr. Riggs' experience was the rotating of crops and the holding of the nitrogen in the soil with growing crops. Nitrogen or ammonia, the ingredient farmers pay 25 to 30 cents per lb. for, the soil has no power to hold, while plants have. The rains and washings carry off from the soil every year, if they are left bare, more than the whole amount of fertilizers applied. Prof. Johnson then gave an elaborate idea how soils were made, and what they contained, and said all soils were once granite rocks, which in ages past had been pulverized. The decay of vegetable matter simply intensified growth. The atmosphere furnishes nine-tenths of every crop. Perfect plants can be raised in water without soil; accumulating carbon, its fertilization, from the atmosphere. The object of special fertilizers was to supply a particular want of soil and crop; and farmers should study to know where is the deficiency. The farmer lives in a current of plant food, and he is the luckiest who can catch and hold the most of it. Prof. Johnson, after giving many valuable hints, closed by saying that it required a good deal of head to be a farmer, and he had more respect for a successful farmer than any other man.

HUDSON CORN.—In answer to sundry inquiries, we would state that Thos. W. Levering & Sons will have seed from the original grower.

Agricultural Schools.

To the Senior Editor of the American Farmer:

My old and highly esteemed friend—Herewith I send you a communication addressed to myself, as Corresponding Secretary of the Pendleton Farmers' Society, dated December, 1846, from the late J. S. Skinner, then editor of the "*Farmers' Library*," the object of which you will see and doubtless appreciate. I also enclose the articles referred to, which were sent me with the letter.

I would be pleased, as many others of your readers no doubt would be, to see the whole republished in your extensively circulating paper, that our old and revered friend at one time so ably edited. Our friend lived before the time to ensure success in his noble and praiseworthy object. Would he had lived to this day, which yourself and I have, with grateful thanks, been spared to see—when he could have realized that support in his good and noble efforts, he so richly deserved—in the thousands and tens of thousands of "*Patrons of Husbandry*," members of the vast number of "*Granges*" now existing and daily increasing in almost every State in the Union. Would, I say, he could have been spared to witness this most encouraging and happy change in the prospects of the agriculturists of our whole country, who have heretofore only been considered as "*the hewers of wood and the drawers of water*" for other and less worthy professions, and in whose cause he spent the best days of his industrious and noble life. GEO. SEABORN.

Pendleton, S. C., Dec. 22, 1873.

We thank our venerable friend and correspondent for his kind remembrance of us; and we assure him it would give us great pleasure to comply with his request to publish the papers he has forwarded; but we find it impracticable to do so, as they would occupy several pages of our paper, on account of the great pressure upon our space at the present time, of matters more immediately requiring attention.

The object Mr. Skinner had in view was the recommending Congress to appropriate from the national treasury, or from the sale of public lands, a sufficient sum to be donated to the several States for the establishment in each of Agricultural Normal Schools, for the instruction of the youth of the country "in agricultural chemistry, mineralogy, vegetable and animal physiology, civil engineering, &c." Mr. S. did not live to see the realization of his aspirations; but our journal, which he founded, agitated the subject through its columns, and to the old *Maryland State Agricultural Society*, of which the senior editor was Secretary during its entire existence, are the farmers of the United States indebted for the success of that great measure which was shadowed forth in the memorial prepared by Mr. Skinner: the establishment in every State of a school or college upon the principles indicated therein. The bill was reported in the United States Senate for the accomplishment of this object, by Mr. Morton, then as now a Senator from Indiana; the introduction to which was in these words: "The Committee on Agriculture, to whom was referred the memorial of the Maryland State Agricultural Society, submit the following report"—and concluding as follows:

"The committee, in further elucidation of its views, submit the said memorial, which contains the recommendations of Washington upon the subject, as a part of this report, and ask that it be printed herewith."

Mr. Morton's report, with the memorial of the Maryland State Agricultural Society, was published in the *American Farmer* for August, 1854, (vol. x.) and we refer to these facts to show, in the first place, what can be done by the co-operation of farmers, like other classes; and in the second, that it was due to those of Maryland, through their organized association, that this great work was made a complete success. They first set themselves to work under the lead of Calvert, the McHenrys, Davis, Wharton, Hughes, Earle, Glenn, and a host of others, who, in accordance with the advice of *Hercules* to the wagoner, went to work themselves and erected with their own means the beautiful college building near the capital, and subsequently urged the subject of agricultural education upon the National Legislature, with the result stated above, in the endowment of similar schools in each State, and to perfect which the several State authorities have generally co-operated by liberal appropriations. It now only remains for the farmers of the country to watch with a scrutinizing eye that these institutions shall not be perverted to grovelling political purposes, or mere sinecure places for favorites or imbeciles. The granges and farmers' clubs and associations will accomplish a great service in seeing to it, that the liberal appropriations of the people's money are not uselessly expended, so far as the interests of those they represent are concerned. Much complaint is being found in several of the States to the management of these colleges, and we find a resolution has been introduced into Congress by Mr. Monroe, of Ohio, for an inquiry as to the manner in which the liberality of the Government has been exercised, and whether the terms of the subsidy have been properly complied with.

As applicable to the present times we give the following extract from an editorial of Mr. Skinner, published at the time of the issuing of the memorial alluded to by Mr. Seaborn, showing that what he recommended at that time, the farmers of the present day have in good earnest taken in hand:

"But what said Hercules to the wagoner imploring his assistance? 'If men wish to be helped, they must learn to help themselves.' Farmers, you have the power of numbers, the power of productive labor, the claim of much the greatest contribution to the public means; you have all sorts of power and all sorts of title to superior influence in the Government on your side, *except* the power of *knowledge* and *of enterprise*, and there *you are beaten by every class of society*. Look at your relative numbers—persons *engaged in learned professions*, 65,255; internal navigation, 33,076; in navigating the ocean, 56,021; in manufactures, 791,749; in commerce, 117,607; in *agriculture*, 3,719,951."

The Apiary.

The Langstroth Movable Frames for Bee Hives.

To the Editors of the American Farmer:

The patent on the Langstroth hive having expired on the 5th of October last, every one is at liberty to use the movable frames, and as it is time that bee culture was receiving more attention in our State, a few words about these necessities for its successful prosecution may be worth a place in your paper.

That they are necessary, in any profitable system of bee-keeping, no one who has had any experience in their use will deny, and I hope to induce those who are still keeping bees on the old system to try at least one movable comb-hive this season, feeling sure that they will be well repaid for their trouble and the little extra expense in the greater pleasure and profit which they will derive from their bees.

The invention of Mr. Langstroth consists in having each comb built in a wooden frame, so suspended as not to touch the hive at the top, bottom or ends, and allowing the bees free passage all around them. These frames are movable, thus enabling you to get at all parts of the hive, and giving you complete control over your bees at all times.

The cuts given above represent a very useful form of the hive, probably the best form for general use,—as, if well built, it will stand the weather without protection, and is so simple as to be easily managed by any one. The first cut shows the hive arranged with glass boxes for surplus honey, and the second is the same hive with a second story added, from which the honey may be taken in the little square frames, which most persons have seen in the stores. A full-sized frame, such as are used in the body of the hive, can be put in it and the surplus honey obtained with the honey extractor, a machine which I will describe in a future article. In both the above cuts the cover over the glass window is removed, showing the ends of the comb frames at the back of the hive.

A simpler form of the hive may be made, and one which will answer any ordinary purpose, by taking for the sides two pieces of good white pine board (which should be dressed on the inside) 20 inches long by 10 wide—the ends should be 14 inches long by 9½ wide—nail these between the sides, with the bottom edges flush and the top edges half an inch below the top of the sides; now take two pieces, 2 inches wide and 16 long, and nail them across the ends of the hive, with their upper edge flush with the top of the sides, thus forming a rebate to support the comb frames. Cut a door-way 4 inches long and ¼ of an inch high out of the lower edge of the front end, and your hive is done, excepting the top and frames. The top should be 26 inches long and 20 wide, made of 2 pieces, with the crack battened to prevent leaking, and should be fastened together by two cleats, two inches wide, *screwed* on the under side, one at each end; these will fit against the ends of the hive and keep the cover in place, as it is not to be fastened to the hive, but left movable. Each hive should have a separate stand, made by nailing 2 boards, each 10 inches wide and 24 long, to 2 pieces of 3 by 4 inch scantling, making a stand 20 by 24 inches and 5 inches high. This may seem very low to some, but when the bees are returning to the hive after a long flight, it is much easier for them to enter a hive near the ground than one raised a foot or so above it, and if they miss the alighting board it is very easy for them to crawl up the side of the scantling, which should be nailed even with the front edge of the board, and enter the hive.

To make the frame, take for the top bar a strip

of white pine, ⅞ of an inch wide by ¼ thick and 19¼ long; the bottom piece is the same width and thickness but 17¼ long; the end ⅞ by ¼ and 8¾ long; nail the end piece to the under side of the top bar 1 inch from each end, and then nail the bottom piece to the lower end of the end piece, thus making 17¼ by 9⅛ inches outside measurements, with the top bar projecting 1 inch at each end, to rest on the rebate in the hive and suspend the frame. Ten of these frames constitute a set, and hang in the hive, running from front to rear.

I hope I have succeeded in making directions clear enough to enable any one tolerably familiar with the use of tools to follow them. If I have not, I will be happy to give any further information if addressed through the editors of the *Farmer*. I propose to give next month directions for transferring bees from common to Langstroth hives, and in future numbers some papers on bee management, with the movable comb system.

D. M. WORTHINGTON.

Baltimore County, Md.

The Poultry Yard.

WESTERN N. Y. POULTRY SOCIETY.—This society's late show at Buffalo is represented by the *Live Stock Journal* as a great success. The *Journal* says that the plan of giving prizes for individual birds was well received, and is undoubtedly a great improvement. The exhibition of poultry was larger than ever before, and of finer quality than at any exhibition yet held in the United States. The entries numbered 1,227, against 735 last year. The Games lead, numbering 168, the Cochins came next with 164, the Bantams third with 133, the Brahmas fourth, 112, and the Hamburghs fifth, 94. The turkey tribe was well represented, and the Narragansetts made their first appearance on the Buffalo poultry stage. One pair of Bronze weighed 65 pounds. The ducks were represented by the Muscovy, Rouen, Aylesbury, Cayuga, Crested, and the beautiful little Wood duck. Also the novel Imperial Pekin ducklings. The exhibition of dressed poultry was exceptionally large and fine. The bird possessing the most beautiful plumage was a Chinese pheasant. Plumbly's egg-detector consists of a looking-glass placed in a box under a perforated cover containing the eggs, and with an aperture at one end for examination of the reflection of the egg. If this reflection shows the egg to be dark or cloudy, it has commenced to decay.

An important feature of the exhibition was the display of fish, the collection including salmon trout, brook trout, white fish, gold fish, sticklebacks, shrimp, stone fish and cray fish. Some ferrets were also exhibited.

The pigeons were especial favorites among the ladies, and they are certainly among the most remarkable exhibitions of the breeder's power. Not content with developing beauty, their breeders also bring into prominence some characteristics very difficult to admire.

Several "odds and ends" were on exhibition, such as squirrels, rabbits, a bald-headed eagle, a "What-is-it"—supposed to be a cross between the turkey and the guinea hen—and a trio of "nigger fowls"—so called because of the black color of their flesh, which, with their rough white feathers, renders them anything but attractive

The American Poultry Association was in session during the exhibition, and revised the Standard of Excellence.

DUST BATHS FOR POULTRY.—Cleanliness is important in fowl-houses, for experience shows that poultry are unfavorably affected by the emanations from filthy quarters, and, besides, working in places where roosts and floors are covered with the droppings, is decidedly unpleasant. Dry earth, in the form of powder, scattered everywhere, will absorb the bad odors, giving a wholesome atmosphere to the hen-house, and at the same time preserve the manure in the least offensive condition. Besides these purposes, a box of dry earth should be in a convenient corner of every fowl-house for the fowls to roll in. Dust from the highway is the most convenient. Replace the same by an equal quantity of good gravel, and the public will be the gainer.—*Live Stock Journal.*

The Agricultural Implement Trade of Baltimore.

We continue this month the notice of the firms engaged in this business, beginning with

L. H. LEE & BRO.

who are the General Eastern Agents of the well-known "Champion" Reaper and Mower, and who are the only house in this city making an exclusive specialty of the sale of one machine of this kind. Located at 54 and 56 Light street, they have an extensive double warehouse filled to its whole capacity on every floor with machines for the coming harvest, and these, they tell us, will be shipped, and their places refilled more than once, before the season for sales is over.

The Champion has a wrought-iron frame, being the only machine, we believe, in which the frame is entirely of this material, and the other parts most liable to wear and breakage are made of malleable iron, which experience has proved tougher than steel. Of this machine there are made, a light mower, which is not adapted for the reaping attachments, and two sizes of combined machines, either with droppers or self-rakes to the reapers.

A new arrangement, which has lately been devised and affixed to these machines, is a tilting arrangement, by which the driver, without stopping the machine, can tip the points of the cutter-guards down or up, so that laid and tangled grain can be cut even if almost flat, and more effectually and easily, it is claimed, than by any similar contrivance on any other machine.

Another device, possessed only by the Champion, and regarded by its manufacturers as a most valuable feature, is an adjustable connection between the pitman and the knife, consisting of a ball and socket joint and a ratchet bolt, by which all loose motion is taken up, preventing wear and noise. The Messrs. Lee inform us that, owing to this perfect contrivance, in their four year's experience in selling the Champion in Baltimore, they have not had a single case of a broken knife.

The Champion was exhibited at Vienna, and in common with the other American machines won great commendation, and as was the case with nearly all shown, received several medals; but the numbers sold on the continent last season, and ordered for the coming, are all regarded as more substantial marks of the popularity of this machine in Europe.

The Champion is made by Whiteley, Fassler & Kelly, Springfield, Ohio, who will turn out for the harvest of 1874, 25,000 machines.

H. P. UNDERHILL.

This gentleman is the general agent of the manufacturers of the Bickford & Huffman grain drill; a machine which we have often referred to in these pages, and one which is widely and favorable known as the embodiment of many effective mechanical devices, and as having stood well in a long-continued test of its capacity in many diverse sections.

Col. Underhill makes a specialty of this drill, combining with it but one other machine, of which we will speak below, and has his headquarters and depot at 64 S. Sharp street. His sales last season, as he informs us, were double what they ever were before at this distributing agency in a single season, and he was unable to supply all his orders.

The general features of the "Farmers' Favorite," which is a synonym the makers give their drill, are so well known that we need not take space here to enumerate them. It is claimed that there are continual improvements being made in the various parts of the machine, or in their adaptation to the work to be done, or to each other. One of the latest of these minor but still important alterations is a *combined* spring and break tube. The adaptation of the spring, and the consequent tension, not being to keep the tube in, but to return it to, its place when it strikes a stone or root.

A special claim of this drill is for its certainty of distribution and accuracy of measurement of seed sown, and its adaptation for seeding all kinds of grain, both small and large. A new use to which it is now being put is for planting corn in drills. All but two of the tubes are closed and the corn is dropped in the rows about six inches apart and covered. It is said that on land which is in good order, and where the Thomas Harrow is used for cultivating corn, this plan has answered very well.

The other machine offered by Col. Underhill is the Wisner Sulky Rake, a new candidate in this region for public favor. It is claimed that this rake is of superior construction as regards materials and principles. It is either self-discharging or worked by a hand lever; and it has connected with it the grass seed attachment of the Bickford & Huffman Drill, an arrangement for sowing seeds which is becoming popular.

[We are compelled, from the pressure upon our pages, to omit till next month our notices of D. Knox & Co. and Linton & Lamott, prepared and partly in type.]

FIRESIDE DEPARTMENT.—Our lady friends will find that this has been pushed out of this No. We hope to do better hereafter. There are many articles, however, which the ladies will doubtless read with pleasure and profit.

GUANO *vs.* CLOVER.—From a correspondent, W. H., of Calvert county, Md., we have an estimate of the comparative value of commercial fertilizers and the grasses, in which the ground is taken that with the former no permanent improvement can be made; whilst with clover, the poorest land, once properly set, can be permanently improved: thus taking the same view as presented by Prof. Hallowell. We cannot give the whole of the argument of our correspondent, which was crowded out last month, but must content ourselves with the conclusions at which he has arrived. The earth, he contends, needs covering, and this covering is prepared for it in the economy of nature:

"Denude," he says, "the earth of its grass, herbage and plants, expose it to the frosts of winter and burning suns of summer, and a most destructive experience will soon teach us the consummate wisdom and benevolence in a provision which furnishes food for the philosopher, and which should fill all minds and hearts with gratitude to Him who has done all things well. Grass and not guano, then, is the means which we should use to improve our worn-out lands. Some plants, however, are better adapted to this than others, such as the clover plant and the pea. Just here I would bring in a little guano to help out the cause, as in this case it would pay more than compound interest.

Now if we wish to improve our lands this is the way to do it;—one of the ways at least: Plow up your land, get it in good condition, prepare it well and then sow it down to clover, giving the land a good strong dose of some good fertilizer broadcast. By this means you will secure the first year a strong rapid growth of dense clover, a stand that will completely hide the land, keep it moist and cool, and therefore improve it the first year more than fifty per cent. perhaps. The second year you need only plaster it, and the growth will be greater than the first, so much so that you can cut hay enough to more than pay for your guano. And the third year your land will be in good heart and pay for all your trouble, time and expense. And so continue from year to year, and I will warrant the sheriff will never mend your coat for you. I call this the land-renovating system. You enrich your land in order to make good crops, and you make them because you act thus wisely.

Any man can improve his farm in this way if he will, since it is cheap, economical, permanent. I do not ignore guano altogether. It is good in its place; but, used to excess, while it pays the manure merchant it ruins the farmer."

HYDRANGEA PANICULATA GRANDIFLORA.—A friend writes us of this shrub: The principal trouble we find with it is that it loads itself so with bloom that the growth is materially retarded. We had flower heads last summer on plants about a foot high which were fully nine inches long and six in diameter, and remained in perfection two months. It is the best thing in the way of hardy shrubs of late years.

Japan Primrose—"Queen of Primroses."

The seed catalogue of Mr. John Saul, Washington, (lately received,) contains a selection of very choice flowers. This gentleman, being an extensive florist, saves himself many of the seeds of the rarest varieties, which is an advantage purchasers will appreciate.

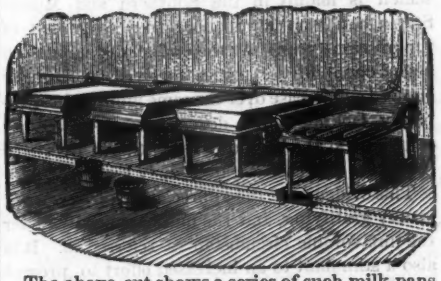
From his work we give a cut of the new Japan Primrose, which is a new plant that has created much enthusiasm among the lovers of flowers. It is, as its name indicates, a native of Japan, whence it was with great difficulty introduced. It is described to be perfectly hardy in England, and is said to be so here. It is about a foot and a half high, bearing four or five separate whorls of flowers, each an inch in diameter, of a splendid magenta color. The leaves resemble those of an English Primrose, but are much larger. It blooms in April and May.

The seed are sometimes slow in germinating, a part of them not coming up until the second season. Persons, therefore, growing this plant from seed should be careful on this point. It would probably be more satisfactory to the generality of flower growers to buy the plants, which we notice all the florists are now offering in their catalogues. A great sensation was occasioned in England by its introduction.

Thornburn & M'Ginnis' Lime Spreader.

We give herewith a cut of this machine, which has heretofore been referred to in the *Farmer*. Its form is different, as will be seen, from any spreader heretofore before the public, the cylinders generally used being superseded by a simple arrangement which appears to do its work very efficiently. We would say, in answer to inquiries that we have received, that we have seen this machine work, and that, although there were some circumstances unfavorable to a full development of its capabilities, it operated in a very satisfactory and thorough manner. The spreader is made by the Taylor Manufacturing Co., at Westminster, Md., and is for sale in this city by Messrs. Griffith, Baker & Bryan, 41 N. Paca St.

Jewett's Patent Milk-Pans.



The above cut shows a series of such milk-pans as are referred to by our correspondent, Mr. Bliss. It was contemplated to furnish other illustrations of implements, &c., used in the factories; but as the dealers in these articles at the North issue illustrated and descriptive catalogues, it has been suggested by Mr. Bliss that these can be furnished to those directly interested, and those of several houses can be seen at the *American Farmer* office.

LEGISLATIVE.—Since our first form was printed both houses of the Maryland Legislature have passed the *Fish Commissioners* bill, and a dog law has also been adopted. Our space only admits of this mention of these acts, and we will notice their provisions in our next.

The American Farmer.

PUBLISHED ON THE FIRST OF EVERY MONTH

By SAML. SANDS & SON,

9 *North street, near Baltimore street, Baltimore, Md.*
(*sign of the Golden Plow.*)

SAML. SANDS, } Editors and Proprietors.
WM. B. SANDS, }

SUBSCRIPTION, $1.50 a year, in advance. To Clubs of five or more, $1.00 each. For $10, eleven copies will be sent.

ADVERTISING RATES.

	1 *Mo.*	3 *Mo.*	6 *Mo.*	1 *Year.*
One Square, 10 lines.....	$ 1.50	$ 4.00	$ 7.00	$ 12.00
Quarter Page.....	6.00	15.00	22.50	35.00
Half Page.....	12.00	25.00	40.00	70.00
One Page.....	20.00	45.00	75.00	120.00

Cover Pages subject to special contract.
Transient Advertisements payable in advance—all others quarterly.
Advertisements should reach us by the 20th of the month, to secure insertion in the succeeding issue.

MARCH 1, 1874.

Words for Ourselves.

We incidentally stated in our February No. that, notwithstanding the late "panic" had borne peculiarly heavy upon the farmers and planters of the South by the depression of their great staples, the circulation of the *American Farmer*, which is mainly in the Southern and Middle States, had very largely increased over that of the previous year. At the end of the month an actual count of the names received in January showed an increase over the same month of 1873—barely lacking half a dozen names—of 50 per cent., and at the hour of writing this in February (20th) the increase is handsomely kept up.

This evidence of the appreciation of our work is very gratifying, and the more especially under the unfavorable circumstances referred to. It is also a stimulant to an increased effort to present such a paper to our readers as will be worthy of their continued favor.

We believe we have the experience and the facilities necessary to offer such a periodical as will commend itself to our intelligent farmers, who, we think, will agree with us that while the *Farmer* may claim that age which ought to be accompanied by wisdom, it does not show a lack of the freshness and vigor of youth.

These remarks are made not in any spirit of braggadocia, but rather in justice to ourselves and to all of our friends everywhere, to whose timely exertions we owe so much in the commending of our paper to the fostering patronage and kind regards of the best class of the agricultural public.

We may say with all candor and sincerity that we doubt if any paper ever had such warm friends. Almost every mail brings us clubs of subscribers forwarded by gentlemen whom we have never seen, and many of whom, doubtless, we never will see face to face, and who say in the most earnest manner that they collect these clubs because they think in introducing to them the *Farmer* they are doing their friends an essential service.

It is on this ground, too, that we ask all our present readers to continue their efforts to extend our circulation among their neighbors. Every step gained in this direction is calculated to increase the value of their own estates as well as that of their own labors. The spirit of improvement is abroad, and each one who wishes to see it extended to his own vicinity, must be himself up and adoing to avail of the opportunities presenting. May we not say, without vanity, that the enlarging of the capacity for usefulness of the *Farmer*, gives all an opportunity of doing good to his fellows? We believe we have a wide field opening for usefulness—we think we need not assure our friends that we will do our utmost to fully occupy and improve it. We therefore claim their help as our *due*.

Our readers cannot fail to notice that though last month we were obliged to increase the number of our pages, we have this month been compelled to still further enlarge our space, owing to the demand for room by advertisers who are desirous of availing of the columns of the *American Farmer;* and as an illustration of the spirit animating the friends of improvement in agriculture, and of our paper as contributing to that improvement, we submit from many of similar tenor, the two following letters:

Messrs. Sands:—Please accept my sincere thanks for the favors you have conferred on me. The old *American Farmer* has been sent to me for more than a year, when the printer had not been paid. If you knew the condition of things here I know you will excuse me. Yesterday, at our Court, I made up a club of six which will be forwarded in a day or so, by my neighbor Mr. W. I owe you for last year, but just as soon as my crop of tobacco is sold, you will be paid. I could not do without the *Farmer*. It was established the year that I was born; I have been reading it ever since I have been to myself. It has helped me a great deal. I plough deeper, raise more grass, keep better stock, salt them oftener, make better shelters, a great deal more manure, have learned to push my work and not to let the work push me, to take special care of the ashes and hen manure, to compost sweepings of the yard, all trash about the back yard, soapsuds, night soil, and every thing of the sort, and a great deal

more. The result is, that my land has been constantly improving, while that of my neighbors, who do not read the farming papers, is going back. All this improvement I owe in a great measure to the old *American Farmer*.

Yours, respectfully, H. G. H.

Louisa Co., Va., Feb. 10, '74.

Messrs. Sam'l Sands & Son:

Gentlemen—With the enclosed list I send you a post-office order; hope it will reach you safely. I am rather old now to stir much during the winter months, but my wife and daughter are very active in soliciting subscribers for you; and when either of us succeed in obtaining one among our neighbors, we feel that we have done them a favor indeed. Very respectfully, S. E. S.

Gates Co., N. C., Feb. 18, '74.

To Correspondents.—We are so liberally favored by our friends that the enlargement of our space still fails to give room for the matter crowding upon us,—all of it, too, of the most practical character. This month we go to press, leaving unused nearly eight pages in type, besides an accumulation of material which would more than make up another full number. This issue of the *Farmer*, as it will be seen, contains 76 pages,—40 of which are reading matter. We particularly regret being again compelled to omit, with a number of other valuable papers, an article on "Farm Life," by a young Maryland farmer.

A fine Seedling Peach.—Mr. R. C. Shoemaker, of Jarrettown, Montgomery Co., Pa., a very intelligent gentleman, whom we had the pleasure of meeting at the recent meeting of the Penna. Fruit Growers, informed us that he has growing on his farm a seedling tree which has borne some eleven years,—the fruit being of such decided merit that it would seem to be worthy the attention of those seeking new varieties. It is a white-fleshed free-stone peach of medium size; sweet, very rich and juicy; the skin very thin, with delicate rose dots. It is claimed to be of the highest quality, and as far superior to the Smock as a Bartlett is to a hedge pear. It ripens near Philadelphia the last week in September.

Sale of Ayrshire Cattle.—Mr. L. E. Rice, of Princeton, N. J., has sold to Mr. Rolfe S. Saunders, of Knox Co., Tenn., according to the Knoxville *Press and Herald*, a herd of imported and thorough-bred Ayrshire cattle and a fine young Hambletonian stallion.

☞Our old friend, Mr. B. S. Benson, well known as reliable in anything he may have to say, testifies on another page as to his experience in the use of Coe's Super-phosphate, used on his farm in Anne Arundel Co.

Sales of Maryland Herds.

From the announcements in our advertising pages it will be seen that Messrs. Coffin and McHenry intend to sell, the former his entire herd of Short-horn cattle, the latter a number of Jerseys, besides Devons and other stock.

The Muirkirk herd has been collected with great care and doubtless at a heavy expense. It comprises many individuals of great merit, and is pronounced by the highest authority to be, as a herd, "one of the best in the whole country, and to contain animals worth crossing the Atlantic to obtain." The families represented are those most highly prized, the Booth blood being preserved in great prominence and purity, and the competition which will be witnessed to secure types of the most popular strains will doubtless be lively and earnest. Mr. Page has been retained to conduct the sale, and the attendance will probably be the largest that such an event has ever drawn together within the borders of our State. The date of the sale has been so fixed as to suit persons who purpose attending the great sales in the Northwest.

The formation and breeding of the Muirkirk herd has been pursued with much enthusiasm by Mr. Coffin; but, charged with the direction of a large industrial establishment, he finds the demands upon his time too great to allow of the personal attention required for the successful management of a large herd, and instead of being a relaxation and a pleasure, it has become a burden, and he has therefore concluded, doubtless with extreme reluctance, to give it up.

Mr. McHenry was one of the earliest breeders of Jerseys in Maryland, and his herd comprises many specimens of that race of great merit, having been bred doubtless with great care and judgment. We are not yet advised how many head will be offered at this sale, which takes place on 8th of April.

It is presumable that of Mr. Coffin's herd the majority will go out of the State, since we have so few breeders of the Short-horns amongst us, and on this account we regret very much that this valuable and noted herd is to be sold. Fine cattle are not so numerous in Maryland, that we can see without concern the separation and scattering of these two representative collections, but we hope that there will be amongst our breeders and farmers enterprise and public spirit enough to retain here at least some of the finest types presented of either race.

Our Premium List is again omitted this month. Its conditions are open to the 31st of March. Persons desiring copies will be supplied upon application.

Platform of the Patrons of Husbandry.

The National Grange, which held its annual meeting last month at St. Louis, unanimously adopted the following resolutions as an official enunciation of the general objects of this Order. We give room to this expression of the designs of the granges, with great pleasure. We are free to acknowledge that we see nothing in this statement of their principles to which any honest man can object to subscribing. The style is as unobjectionable as the matter. It is clear, terse and harmonious. The aims in view, are those that command the assent and support of tillers of the soil everywhere; they are such as will not find dissent, either, from just men of other professions.

The question of the secrecy of the order is one which, it will be noticed, is not touched at all. The omission, we think, is worthy of remark, since this feature is the only one to which many men object. It does not have that importance, perhaps, in the estimation of the Patrons which outsiders attribute to it.

Mr. Saunders, to whom has been generally awarded the credit of having originated the order, has recently assured an "interviewer," that the secret feature has no other significance than to enable the grange to manage its affairs without the interference or observation of outsiders—and is a mere business matter which all co-operative associations are necessitated to avail of, in their private affairs.

We are glad this formal avowal has been made of the true aims and intents of this numerous and rapidly-extending order. We are more glad to find that it has either receded from, or that it has never countenanced, as has been averred of it, the disposition to intrude as an organization into local and national politics, or to interfere with the operations of natural laws of trade, which ought to and will regulate themselves.

The address to the Patrons of the Cotton States is also timely, able and well-intended, and will have, doubtless, a wholesome effect.

PLATFORM OF PRINCIPLES.

Profoundly impressed with the truth that the National Grange of the United States should definitely proclaim to the world its general objects, we hereby unanimously make this declaration of the purpose of the Patrons of Husbandry:

First. United by the strong and faithful tie of agriculture, we mutually resolve to labor for the good of our order, our country and mankind.

Second. We heartily endorse the sentiment, "In essentials, unity; in non-essentials, liberty; in all things, charity."

Third. We shall endeavor to advance our cause by laboring to accomplish the following objects: To develop a better and higher manhood and womanhood among ourselves; to enhance the comforts and attractions of our homes and strengthen our attachments to our pursuits; to foster mutual understanding and co-operation; to maintain inviolate our laws; to stimulate each other to labor; to hasten the good time coming; to reduce our expenses, both individual and co-operative; to buy less and produce more, in order to make our farms self-sustaining, to diversify our crops and crop no more than we can cultivate; to condense the weight of exports, selling less in the bushel and more on the hoof and in the fleece; to systematize our work, and calculate intelligently our probabilities; to discountenance the credit system, mortgage system, fashion system, and every other system tending to prodigality and bankruptcy; we propose to act together for our mutual protection and advancement of the association; we shall avoid litigation much as possible by arbitration; we shall constantly strive to secure entire harmony, good will and brotherhood among ourselves; and to make our order perpetuate, we shall earnestly endeavor to suppress personal, local, sectional and national prejudices, all unhealthy rivalry, all selfish ambition. Faithful adherence to these principles will insure our mental, moral, social and material advancement.

Fourth. We desire to bring producers and consumers, farmers and manufacturers, into the most direct and friendly relations possible; hence we must dispense with the surplus of middlemen. We wage no aggressive warfare against any other interests whatever; on the contrary all our acts, and all our efforts, so far as business is concerned, are not only for the benefit of producers and consumers, but also for all other interests that tend to bring these two parties into speedy and economical contact. Hence we hold that transportation companies of every kind are necessary to our success; that their interests are intimately connected with our interests, and harmonious action is mutually advantageous, keeping in view the first sentence in our declaration of principles of action, that individual happiness deepens our general prosperity. We shall, therefore, advocate for every State increase in every practicable way of all facilities for transportation cheaply to the seaboard, or between home producers and consumers, all productions of our country. We are not enemies of railroads, navigable and irrigating canals, nor of any corporation that will advance our industrial interests, nor of any laboring classes. In our noble order there is no communism and no agrarianism. We are opposed to such spirit and management of any corporation or enterprise as tends to oppress people and rob them of their just profits. We are not enemies to capital, but we oppose the tyranny of monopolies. We long to see the antagonism between capital and labor removed by common consent, and by enlightened statesmanship worthy of the nineteenth century. We are opposed to excessive salaries, high rates of interest and exorbitant percentage or profits on trade, as they greatly increase our burdens and do not bear a proper proportion to the profits of the producers. We

desire only self-protection, and protection of every true interest offered by legitimate transactions, legitimate trade and legitimate profits. We shall advance the cause of education among ourselves and for our children by all just means within our power. We especially advocate for our agricultural and industrial colleges, that practical agriculture, domestic science, and all arts which adorn the home, be taught in their courses of study.

Fifth. We emphatically and sincerely repeat the oft-repeated truth taught in our organic law, that the grange—National, State or subordinate—is not a political or party organization. No grange, if true to its obligations, can discuss political or religious questions, nor call political conventions, nor nominate candidates, nor discuss their merits in its meeting. Yet the principles we teach underlie all true politics, all true statesmanship, and, if properly carried out, will tend to purify the whole political atmosphere of our country,—for we seek the greatest good to the greatest number. But we must always bear in mind that no one by becoming a grange member gives up that inalienable right and duty which belongs to every American citizen, to take proper interest in the politics of his country; on the contrary, it is right for every member to do all in his power legitimately to influence for good the action of any political party to which he belongs.

Sixth. By the nature of our organization, it being peculiarly a farmers' institution, we cannot admit all to our ranks. Many are excluded, not because they are professional men or artizans, but because they have not sufficiently a direct interest in tilling or pasturing the soil, or may have some interest in conflict with our purposes; but we appeal to all good citizens for their cordial co-operation to assist us in our efforts towards reform, that we may eventually remove from our midst the last vestige of tyranny and corruption.

Seventh. It shall be an abiding principle with us to relieve any of our oppressed and suffering brotherhood by means at our command.

Last but not least, we proclaim it among our purposes to inculcate a proper appreciation of the abilities and sphere of woman, as indicated by admitting her to membership and position in our order.

Imploring the continued assistance of our Divine Master to guide us in our work, we here pledge ourselves to faithful and harmonizing labor for all future time, to return by our united efforts to the wisdom, justice, fraternity and political views of our forefathers.

MEMORIAL TO THE PATRONS OF HUSBANDRY IN THE COTTON STATES.

It is an argument in favor of mixed husbandry in the South, instead of expending the energies of the people in raising a single crop. It says during the past seven years our cotton fields have added to the wealth of the world two thousand millions of dollars, and caused prosperity to smile upon every one who has handled our crops, save those who struggled for its production annually. The energies of the cotton planter have been exhausted in attempting to produce the maximum crop of a single staple, whilst quite as frequently he has reduced his means of supplying his necessary wants. A system based upon such a policy, and producing such results, must be radically wrong, and, if persisted in, will lead to bankruptcy and ruin. No people can ever become prosperous who are not self-sustaining. Our fertile soil, exhaustless mineral wealth, abundant water power and general salubrious climate avail us nothing, if annually we expend millions for subsistence. It is generally conceded that home-grown bread is cheaper than purchased supplies, and the observation of every planter is that those Southern farmers who live within themselves are more independent, and less encumbered with debt, than those who have relied solely upon the cotton crop. Were it otherwise, it is hazardous for any people to rely upon others for a supply of those articles which are necessary for their consumption. It then refers to famine, which more than once has occurred in India, owing to the efforts of the people to grow cotton to the exclusion of breadstuffs; and adds, that during the past year portions of Iowa, Minnesota and Dakota have been invaded by grasshoppers, which destroyed every vestige of vegetation. Imagine your condition should a similar invasion become general in the Northwest. Couple this with the idea of a total failure of the cotton crop, either from worm, drought or any other unavoidable cause. Improbable as such visitations may appear, have we the power to prevent them, and is it wise to subject ourselves to the possibility of becoming the victims of such calamities?

Our wisest and safest policy is, as far as practicable, to produce at home our necessary supplies. Is there a farm in the South upon which this cannot be done, and at the same time produce a cotton crop as the net result of the farmers' annual labor?

We believe there is not annually four millions bales of cotton produced upon Southern soil. But what proportion of this vast amount is retained to indicate our prosperity? One-half of it is expended for necessary supplies, whilst the remainder is divided in labor and taxes. Hence the cost of production has exceeded the cost of the articles produced. Shall this policy continue? Extensive cotton crops have evinced our unity of purpose and entailed poverty upon us unequally. Uniform adhesion to mixed husbandry would secure our recuperation. Cotton is a necessity, and the extent of that necessity can be calculated with exactness. If three millions and five hundred thousand bales are grown they will be consumed before another crop can be gathered, and a remunerative market price will be sustained. If four millions five hundred thousand bales are grown, the large marginal excess will control and depress the market.

Alternatives for success are numerous, but we rely upon the single one of co-operating in a determination to subsist at home. With this end attained there is no reason why we should not be the happiest, most independent and prosperous people on earth.

The memorial is signed by the masters of the State Granges of South and North Carolina, Alabama, Mississippi, Florida, Arkansas, Louisiana, Georgia and Tennessee, and was not only heartily approved by the Committee on Resolutions, but endorsed by every member of the National Grange.

Maryland State Horticultural Society.

The adjourned meeting was held on 29th January, when the following gentlemen were elected Vice-Presidents for Baltimore county:

Ezra Whitman, Edward Kurtz, Gen. G. S. Brown. The State at large—J. H. McHenry, J. W. Garrett, A. Bowie Davis and Col. Edward Wilkins. The counties—Montgomery, H. C. Hallowell; Prince George's, General Samuel Jones; Queen Anne's, Hon. James T. Earle; St. Mary's, Hon. Benjamin G. Harris; Somerset, James U. Dennis; Talbot, Dr. John Miller; Washington, Dr. Harvey; Wicomico, Dr. Todd; Worcester, Hon. Judge Franklin; Allegany, Dr. Samuel Smith; Anne Arundel, Hon. W. H. Tuck; Baltimore, Charles J. Baker; Calvert, Hon. Judge Magruder; Caroline, J. W. Kerr; Carroll, Colonel Longwell; Cecil, J. A. J. Cresswell; Charles, Major W. B. Mathews; Dorchester, Daniel Henry; Frederick, Hon. Judge Marshall; Garrett, Patrick Hammill; Harford, Henry Fernandis; Howard, Hon. John Lee Carroll, and Kent, W. F. Massey.

The following letter from Wm. T. Walters, Esq., President elect, was then presented by the chair, and read:

BALTIMORE, January 28, 1874.

Mr. Ezra Whitman, Chairman:

Dear Sir—It is only through the press reports I have been made aware of my election as President of your newly organized Horticultural Society. Will you be good enough to convey to its members the personal gratification I feel at the compliment paid me, as well as my sincere regret at my being compelled to decline the position. I trust that you will not fail to count upon my co-operation in a subordinate place in efforts to redeem our State and city from the reproach of being without a society capable of doing so much to cultivate general taste, by inspiring a love for the beautiful in nature. You will have no difficulty, I am sure, in selecting a chief officer greatly more capable than myself, and who will secure unanimity of support.

Very respectfully, your obedient servant,

W. T. WALTERS.

Mr. Pentland moved that a committee be appointed to wait on Mr. Walters, and ask him to reconsider his declination, as it was probable that some misapprehension existed which had induced that gentleman to decline the office.

Mr. W. W. W. Bowie opposed the motion and proposed to go into an election to supply the vacancy.

A motion was then made to defer the election until the next meeting, which was predicated upon the fact that but few were aware of the intended declination of Mr. Walters until the chair had announced it at the meeting, and consequently it was proper that time should be had for the selection of Mr. Walters' successor. The motion was defeated—when Mr. Whitman, Mr. Alex. Brown and Mr. J. H. McHenry were nominated, and the first named was elected. Mr. Walters was then elected Vice-President in place of Mr. Whitman, and the meeting adjourned to the third Tuesday in February.

February 17.—The society met pursuant to adjournment, Mr. Whitman, President, in the chair, who, on calling the meeting to order, thanked the society for the honor conferred upon him.

The Secretary stated that he had received a number of communications from different gentlemen in the counties who had been elected officers, some of them accepting and others declining to fill the respective positions assigned them. On motion of Mr. W. W. W. Bowie, these communications were read. Dr. Geo. W. Dorsey was elected to fill the vacancy in the Vice-Presidency for Calvert, vice Judge Magruder declined. Mr. C. Mowton Saunders and Robert J. Halliday were elected on the Executive Committee, in place of Judge Dobbin and Mr. W. D. Brackenridge declined. Capt. Snow having resigned his position as Corresponding Secretary, Mr. Wm. B. Sands, of the *American Farmer*, was nominated to fill the vacancy, but declined, when the Recording Secretary was directed to perform the duties for the present.

The Executive Committee was directed to consider the propriety of holding a spring exhibition.

After some other routine business, the meeting adjourned to 17th March.

The "Farmer"—Hudson Corn, &c.

To the Editors of the American Farmer:

The *Farmer* has been a very close companion of mine during the twelve months past, and from a perusal of its pages I have derived very much profit as well as pleasure.

I will here thank you for the "Hudson corn," 420 grains in all, which I planted myself, two grains in a hill, giving it a slight sprinkling of barn-yard manure broadcast. It all came up, producing fine, healthy stalks, and bearing from two to four ears per stalk. But the rain came and the flood descended (last August you recollect,) and it fell. Some of it matured and some did not. I husked it all the other day and found I had over two bushels ears, good and bad. I shall plant all I have this spring, and wish I had about a peck or half bushel more. My conclusions in regard to it are these:

It is not an early maturing corn, although I see some of your correspondents state the contrary.

It is a very prolific corn on good land.

It is likely to deteriorate, a considerable part of mine being mixed with yellow, although it was grown entirely to itself.

I grew last year a field of Ohio Mammoth Dent corn, with which I am very well pleased. It produced a fine stalk, with large blades and plenty of them, making valuable fodder when cured. I harvested forty-four bushels to the acre from ordinary soil—no manure—replanted three or four times, and as bad a drought as you or I hope ever to witness again. It is white, small cob, running from twenty to thirty-two rows and from thirty to fifty grains in a row. I believe it would have been one-third larger had it been seasonable. It makes the most beautiful white meal I have ever seen.

Middletown, Del. W. F. G.

☞Messrs. Bullock & Son have taken an office in S. Gay street for sale of their bone dust.

Hygiene.

Hints for Nurses.

The following sensible suggestions are from the pen of Florence Nightingale:

Conciseness and decision are, above all things, necessary with the sick. Let your thoughts expressed to them be concisely and decidedly expressed. What doubt and hesitation there may be in your own mind must never be communicated to theirs, not even (I would rather say especially not) in little things. Let your doubt be to yourself, your decision to them. People who think outside their heads, the whole process of whose thought appears, like Homer's, in the act of secretion, who tell everything that led them towards this conclusion and away from that, ought never to be with the sick.

Irresolution is what all patients most dread. Rather than meet this in others, they will collect all their data, and make up their minds for themselves. A change of mind in others, whether it is regarding an operation, or re-writing a letter, always injures the patient more than the being called upon to make up his mind to the most dreaded or difficult decision. Further than this, in very many cases, the imagination in disease is far more active and vivid than it is in health. If you propose to the patient change of air to one place one hour, and to another the next, he has, in each case, immediately constituted himself in imagination the tenant of the place, gone over the whole premises in idea, and you have tired him as much by displacing his imagination, as if you had actually carried him over both places.

Above all, leave the sick room quickly and come into it quickly, not suddenly, not with a rush. But don't let the patient be wearily waiting for when you will be out of the room or when you will be in it. Conciseness and decision in your movements, as well as your words, are necessary in the sick room, as necessary as absence of hurry and bustle. To possess yourself entirely will ensure you from either failing—either loitering or hurrying.

If a patient has to see, not only to his own but also to his nurse's punctuality, or perseverance, or readiness, or calmness, to any or all of these things, he is far better without that nurse than with her—however valuable and handy her services may otherwise be to him, and however incapable he may be of rendering them to himself.

Big Sunday Dinners.—A Sunday's dinner is made the most sumptuous meal of the week in a great many households, and the guests retire from the table more like gorged anacondas than intellectual human beings, with the result that during the whole afternoon there is such an amount of mental, physical and religious sleepiness, if not actual stupidity, that no duties whatever are performed with alacrity, efficiency and acceptableness. The Sunday dinner made of a cup of hot tea, some bread and butter, with a slice of cold meat, and absolutely nothing else, would be wiser and better for all; it would give the servants more leisure; the appetite would be as completely satisfied half an hour afterwards, while body, brain and heart would be in a fitting condition to perform the duties of the Sabbath.

DOMESTIC RECIPES.

NEW AND OLD.

From a Lady, for the American Farmer.

Muffins.—One pint flour, two eggs, well beaten, as much milk as will make a suitable batter, with a little sour cream, if you have it. Add a small piece of butter or lard. Then dissolve a small teaspoonful of soda in a tablespoonful of cold water, and not quite as much tartaric acid, and stir it in just as you are going to bake them.

English Breakfast Rolls.—Roll a quarter of a pound of butter into a pound of flour; then add a tablespoonful of good yeast, and break in one egg. Mix it with a little warm milk poured into the middle of the flour; stir all well together, and set it by the fire to rise; then make it into light dough, and again set it by the fire. Make up the rolls, lay them on a tin, and set them in front of the fire before you put them into the oven, and brush them over with egg.

Winter Pea Soup.—Boil one pint of split peas in three quarts of water till soft. Then stew in the soup a pound and a half of beef and a slice of bacon, with a few cloves and a little mace. Let it stew for two hours, run it through a colendar, pepper and salt to taste, and add a lump of sugar. Serve with bread, fried and cut into dice, on a separate dish.

Fricaseed Turkey.—Cut up a small young turkey, rinse it in cold water, put it into a stew-pan, and set it over a gentle fire; take off the scum as it rises, and add a large teaspoonful of salt, when it is tender and white, and the same of pepper. Work a tablespoonful of flour with a quarter of a pound of sweet butter, and stir it with the fricasee by the spoonful. Dip a bunch of parsley in hot water, chop it small and put in the stew-pan, cover and let simmer gently for fifteen minutes, then serve with boiled rice or mashed potatoes for breakfast or dinner.

Fun at Home.—Don't be afraid of a little fun at home, good people. Don't shut up your houses lest the sun should fade your carpets; nor your hearts, lest a happy laugh should shake down some of the musty cob-webs there. If you want to ruin your sons, let them think that all mirth and social enjoyment must be left on the threshold when they come home at night. When once a home is regarded as only a place to eat, drink and sleep in, the work is begun that ends in gambling-houses and degradation. Young people must have fun and relaxation somewhere. If they do not find it at their own hearthstones, it will be sought in other and perhaps less profitable places. Therefore let the fire burn brightly at night, and make the home ever delightful with all those little arts that parents so perfectly understand. Don't repress the buoyant spirits of your children; half an hour of merriment round the lamp and firelight of home blots out the remembrance of many a care and annoyance during the day, and the best safeguard they can take with them into the world is the unseen influence of a bright little domestic sanctum.

The great secret of health is obedience to the laws of health.

A Good Fertilizer.

The *Scientific American* says farmers have to pay a high price for an article, which, with a little skill, they could make themselves during the winter months or on rainy days, when they have little else to do, and gives a recipe for a cheap fertilizer successfully used by farmers in Penna. and Ohio.

Our cotemporary is an authority in all economic arts, but we are inclined to differ with it as to the saving which farmers effect in making their own artificial manures. If they can buy from reputable manufacturers compounds of established merit, we believe it is better for them to pay the maker's profit. It is only where there is reasonable doubt in the character of the substance offered them, that it is expedient for them to undertake the manufacture themselves. Farmers must buy their materials at retail rates and mix them by hand or with improvised and unsuitable machinery; their laborers are unacquainted with the ingredients they are using, and, in handling them, are liable to injure themselves, or the property of their employers. Manufacturers, on the other hand, purchase in large lots, seize every advantage of the market by buying in advance of the season for use, have machinery specially adapted to and made for the various manipulations required, and hands who become expert in all the processes of the manufacture. The formula presented below is, however, wanting—except incidentally, as recommended—in the ingredient which is most apt to give trouble and to cause injury in transportation and handling, viz: oil of vitriol, or sulphuric acid, and is doubtless a good one, if the article is applied in sufficient quantities. The mixture is especially recommended for potatoes and wheat, by a farmer who has tried it, and who says he has used it with success on corn and other products. It is as follows:

Take 1,000 lbs. of good mold, sieve and screen it to get the gravel out and make it as fine as possible; then spread on a floor, add 100 lbs. sulphate ammonia, 100 lbs. common salt, and mix with a rake; when thoroughly mixed, add 25 lbs. pearl ash and 22 lbs. sulphate of soda, mix well, then add 400 lbs. ground bone, 25 lbs. best Peruvian guano, and 150 lbs. ground plaster. Mix the whole thoroughly, throw in a pile for forty-eight hours, and it is fit for use. If it is to be used for potatoes in districts where potato bugs are numerous, 5 gallons sulphuric acid may be sprinkled over the mass. The caution is added that the acid must not be used in a confined place, as the fumes are injurious to health, and that if it is spilled on the floor, water must not be thrown on it, as the mixture generates great heat.

ANOTHER RECIPE.—The *Mass. Plowman*, in answer to a correspondent who asked for the formula of Liebig's great fertilizer, says:—

"The following, which we find in the *Journal of Chemistry*, is undoubtedly the one to which our correspondent refers: dry peat 20 bushels; unleached ashes 3 bushels; fine bone dust 3 bushels; calcined plaster 3 bushels; nitrate of soda 40 pounds; sulphate of ammonia 33 pounds. Mix the first, second and third together; then mix the fifth, six and seventh in five buckets of water. When dissolved, add the liquid to the first, second and third articles; when mixed, add the fourth article."

HOME-MADE FERTILIZER.—A North Carolina correspondent who was furnished through our Agency with chemicals for a fertilizer, writes us as follows:

I intended to give you a correct account of the result of my experiment with those ingredients you sent to me last spring and made into a formula that was taken from the *American Farmer*.

It was 40 lbs. nitrate of soda, 60 lbs. sulphate ammonia, 1 bbl. bone dust, 1 bbl. plaster, 1 bbl. oak ashes, ½ bushel salt, mixed with 1,200 lbs. of fine stable manure; the salts mixed in 1 bbl. water, and sprinkled over the manure.

I used it side by side two rows each, with two manufactured fertilizers, 450 lbs. each to the acre, and 600 lbs. of my mixture, or *Wilson's formula*, as I call it. The result of each was about the same. The formula cost me in actual outlay $18 per ton—the purchased fertilizers cost $50 per ton each. Yours, &c. J. WILSON.

JOB PRINTING.—It will be seen by an advertisement elsewhere that persons wishing printing of any kind done, can have the same executed in the best style through this office. We can guarantee that all work sent out will be satisfactorily performed.

Machine Shops at Public Sale.

The undersigned, wishing to dissolve copartnership, will sell at PUBLIC SALE, on Tuesday, the 17th day of March, their Machine Shops, Foundry and several lots of Land. This property is well located for any public business.

WAGONER & MATTHEWS,
mar-1t Westminster, Carroll county, Md.

STEAM MARBLE WORKS.

BEVAN & SONS,

No. 70 HOWARD ST., NEAR SARATOGA,

Would call attention to their fine collection of MONUMENTS, TABLETS, &c.; GRAVESTONES FOR CEMETERIES; also a varied assortment of MARBLE MANTLES, and are prepared to execute all kinds of Marble Work for building. mar-1y

EXTRA EARLY EGYPTIAN BEET, $2 per pound; MARROWFAT PEAS, $3 per bushel; EXTRA EARLY PEAS, $7 per bushel; WHITE SILVER-SKIN ONION, $3.50 per pound; RED ONION SEED, $2.50 per pound; YELLOW ONION SEED, $2.75 per pound; LARGE FLAT DUTCH CABBAGE, $4 per pound; PREMIUM FLAT DUTCH CABBAGE, $5 per pound; TROPHY TOMATO, $4 per pound; LARGE SMOOTH RED TOMATO, $4 per pound.

J. BOLCIANO & SON,

Cor. Calvert and Water Sts., Baltimore.

[mar-1t]

Baltimore Markets, Feb. 24.

The quotations below are Wholesale Prices.

Breadstuffs.—*Flour*—Market dull and demand light. Howard St. Super $5.25@5.75; do. common to fair Extra $6@6.25; do. good to choice do. $6.50@6.75; do. Family $7.25@9. Ohio and Indiana Super $5@5.50; do. common to fair Extra $5.75@6.25; do. good to choice do. $6.50@$6.75; do. Family $7@8 50. City Mills Super $5@6; do. low to medium Extra $6.75@7.50; do. Rio brands do. $8.25@8.50; City fancy brands $11. Rye Flour $4.75@5. Fine Flour $4.25@4.75. Corn Meal, City Mills, $4.50; Western $3.50.

Wheat.—Market dull. Receipts moderate. Sales of Maryland white 155@185 cts. for common to prime; do. red 157@185 cts.; Penna. red 170 cts.

Corn.—Market rather quiet. Southern yellow 74@75 cts.; do. white 75@77 cts. for prime. Western mixed 76 @77 cts. The large receipts in damp condition affect prices unfavorably.

Rye—Dull, with sales at 93 cts.

Oats.—Demand fair and market steady. We quote Southern at 58@59 cts.; Western 55@58 cts.

Broom Corn—Dull. Quotations nominal. Common red 6@7 cts.; Hurl 10@12 cts.

Cotton—Quiet, but prices for good grades firm. We quote as follows: Middling 15¾@16 cts.; low middling 14¾ cts.; good ordinary 13¾@14 cts.; strict good ordinary 14¼ cts.

Dairy Products.—*Butter*—Md. and Pa. rolls 38@40 cts.; Western rolls 38@41 cts. *Cheese*—Western Factory 16@16¼ cts.; Eastern do. 16¼@17 cts.

Hay and Straw—Dull. Choice Timothy $23@24; good do. $20@22. Clover hay $15@17. Mixed $17@20. Rye Straw $15. Oat Straw $15@16.

Live Stock.—*Beef Cattle*—Demand moderate: supply fair. Last sales—best on sale 5¾@6¼ cts.; generally rated first class 4¾@5¾ cents; medium quality 4¼@4¾ cts.; ordinary thin steers, oxen and cows, 3@4¼ cts.

Hogs.—Receipts large. Sales at 7@8 cts net.

Sheep.—In demand; supply light. Common to fair 5¼@5¾ cts.; fair to good 6¼@7 cts.; extra 7¼ cts.; gross stock Sheep $2@8 ₹ head.

Molasses.—Muscovado 32@33 cts.; New Orleans 60@ 75 cts. *Syrups.*—Calvert 58@62 cts.; Chesapeake 46 cts.; Canton Sugar-house 25@28 cts. in hhds. and bbls.

Mill Feed.—City Mills Brownstuff 22@23 cts. ₹ bus., and $24@25 ₹ ton; do. Middlings 25@26 cts. for light, 45 cts. for heavy.

Onions.—Scarce; $6 per bbl.

Potatoes.—Maine Jacksons and Carters, from vessel, $1 ₹ bus.; Early Rose $3.75@4.00 ₹ bbl.; White Peach Blows $3.50 per bbl.

Plaster.—$1.75 ₹ bbl., of 220 lbs.

Provisions.—Market dull. Bulk Shoulders 6¼ cts.; clear-rib Sides 8¼ cts.; Bacon Shoulders 7¾ cts.; clear-rib Sides 9@9¼ cts. Hams 12@14 cents. Mess Pork $16. Lard 10@11 cts.

Rice.—Carolina 8¾ cts. Rangoon 7¼ cts.

Salt. Liverpool Fine $2.10@2.15; Ground Alum $1.20 @ 1.25 ₹ sack. Turk's Island 35 cts. ₹ bus.

Seeds.—Clover $6.25@6.50 ₹ bus. Timothy $3 50@3.75 ₹ bus. Orchard Grass $2.12@2.37 ₹ bus. of 12 and 14 lbs.; Red Top $5 ₹ bag of 50 lbs. Ky. Blue Grass $2.25 a 2.50 ₹ bus. of 14 lbs. Orchard Grass and Clover, demand heavy and prices advancing.

Tobacco.—Receipts small; market dull; no change.

Whiskey.—$1.00 ₹ gal.

Wool.—Firm; receipts light; Washed 45@48 cts; Unwashed, free from burs, 25@30 cts; do. burry 15@20 cts.

NEW ADVERTISEMENTS.

Baugh & Sons.—Raw Bone Super-Phosphate.
A. Coe.—Coe's Original Bone Super-Phosphate.
R. W. L. Rasin.—Soluble Sea Island Guano.
Massey & Hudson.—Vegetable Plants.
Henry C. Jenkins.—Berkshire Pigs for Sale.
Griffith, Baker & Bryan.—Garden Seeds, Agricultural Implements, &c.
Wagoner & Matthews.—Machine Shops at Public Sale.
John J. Willis & Co.—Tomato Seed.
J. J. H Gregory.—Seed for Granges.
J. J. H. Gregory.—Marblehead Mammoth Cabbage.
J. R. Page.—Sale of Muirkirk (Mr. Coffin's) Herd.
Frank Ford.—Hoosac Thornless Blackberry.
Bevan & Sons.—Steam Marble Works.
J. M. Thorburn & Co.—Flower Seeds.
J. D. Oakford.—Prize Poultry and Eggs.
Wm. Bowman—Fancy Poultry and Eggs.
J. W. Kerr.—Fruit and Ornamental Trees, &c.
John Cook.—Strawberry Plants, Grape Vines, &c.
Orange Co. Milk Pan Co.—Premium Milk Pan.
J. Bolgiano & Son.—Seeds.

Contents of March No.

Fish Culture in Maryland..... 81
American Fish Cultural Association..... 82
Pennsylvania Fruit Growers' Convention.... 84
New Fruits, by J. W. Kerr..... 87
Co-operative Dairying, No. 3, by Mr. Bliss... 88
The Cow, by Mr. Hazard, continued..... 89
Cross-bred Dairy Cows..... 90
Management of Stable Manure, by Mr. Wenig, of Prussia..... 91
The Agricultural Situation of France..... 92
A Reminiscence, by Major McCue..... 93
Plowing and Manuring, by Mr. White, of Massachusetts..... 94
Merino Sheep for Maryland, by Gen. Goe.... 94
Straw as Manure, by J. M. McCue..... 95
Merino vs. Cotswold Sheep, by Farmer..... 96
Mixed Farming at the South, by J. D. Thorne, of N. C..... 96
Pea Culture, by Mr. Gilmer..... 97
Cultivation of Lucerne, by Mr. Coffin..... 97
Excelsior vs. Guano, by Mr. Blackstone..... 98
Ice-Houses and Hedges..... 98
Sending Fruit to Market, by Mr. Williams... 98
Agricultural Calendar for March..... 99
Vegetable Garden for March..... 101
Lawn and Flower Garden, Green-Houses, Orchids, by Mr. Brackenridge..... 101
Horticultural Exaggerations, by W. F. Massey. 102
Farmers' Meetings—Maryland State Agricultural Society, 103; Baltimore County Clubs, 104; King George, Va., Club..... 105
Report on Dairies, in Montgomery County... 106
Notes of Sandy Spring Club—Southern Agriculture, Cotton, Potatoes, &c..... 107
Green Crops as Manure for Tobacco..... 108
Hudson Corn for Sale..... 108
Agricultural Schools, by Mr. Seaborn..... 109
The Apiary—Cheap Hive..... 110
Poultry Show in Western New York..... 111
Agricultural Implement Trade of Baltimore. 111
Hydrangea P. Grandiflora..... 112
Japan Primrose, cut..... 113
Thornburn & McGinness' Lime Spreader, cut. 113
Jewett's Patent Milk-Pans, cut..... 113
Fish and Sheep Laws in Maryland..... 113
"The *Farmer*" and its Progress..... 114
To Correspondents..... 115
A Fine Seedling Peach..... 115
Sales of Maryland Herds of Cattle..... 115
Platform of Patrons of Husbandry..... 116
Memorial do. to Southern States..... 117
Maryland State Horticultural Society..... 118
The Farmer—Hudson Corn..... 118
Hygiene—Hints for Nurses..... 119
Big Sunday Dinners..... 119
Domestic Recipes..... 119
Fun at Home..... 119
Formulas for Fertilizers..... 120
Job Printing..... 120
Baltimore Markets..... 121
New Advertisements..... 121

PREMIUM MILK PAN

Most Perfect, Complete and Durable. One pan holds a milking. Four pans in a set.

BUTTER MAKERS,

Send for Illustrated Circulars to the

ORANGE CO. MILK PAN CO.,

mar-1t Franklin, Delaware Co., New York.

AUCTION SALE
OF
THE MUIRKIRK HERD.

The subscriber has been retained by Mr. CHAS. E. COFFIN, MUIRKIRK, Prince George's county, Md., to sell his entire herd of SHORT-HORNS, on

WEDNESDAY, 13th day of May next.

Mr. COFFIN founded his herd with animals either direct or strongly in-bred to Bates, Booth, Princess, Gwynnes, and other good strains, imported and home-bred. Having a personal knowledge of the Herd, I can recommend them to all gentlemen wishing good individuals well bred. The bulls last in use are imported ROYAL BRITON and LORD ABRAHAM, Booths; LORD MAYOR of the Princess tribe, and the extra good BATES BULL, 6TH EARL OF OXFORD.

Muirkirk is a station on the Baltimore and Ohio R. R., 15 miles from Washington, D. C. Three trains each way in the morning.

TERMS:—Cash on sums under $200. Over $200, approved paper at 6 per cent., or a discount for cash of 5 per cent. No postponement, no reserve. Residence 200 feet from railroad.

Catalogues ready early in April, for which address owner or salesman.

JOHN R. PAGE,
Sennett, Cayuga Co., N. Y.

☞The Sale of C. C. PARKS, Esq., Waukegan, Ill., occurs on Wednesday, May 20. Col. KING's Sale at Dexter Park, Chicago, on Thursday, May 21. mar-3t

Improved Stock, Implements, &c.
FOR SALE.

The undersigned, intending to sell or rent a large portion of his farm, and to reduce greatly the number of head of stock owned by him, will SELL AT AUCTION,

On the 8th and 9th April, 1874,

(the live stock on the first named day)

☞A number of Jersey Herd-Book Bulls, Cows and Heifers, a Devon Bull and several Cows, a thorough-bred Stallion, a Trotting Stallion and a half-bred Percheron Stallion, several Horses, Colts and Mules. Also a lot of Farming Implements, Wagons, Harness, &c., &c.

Catalogues will be published some weeks in advance of the day appointed for the sale, and will be forwarded to applicants.

J. HOWARD McHENRY,
feb-2t **Pikesville, Baltimore Co., Md.**

BERKSHIRE PIGS FOR SALE.

I have some thoroughbred PIGS, about eight weeks old, which I will sell for $8 a piece or $15 a pair, delivered in Baltimore. To each purchaser of pigs from me I will send a copy of the *American Farmer* one year.

HENRY C. JENKINS,
mar-1t Pylesville, Harford Co, Md.

TOMATO SEED.

On receipt of ONE DOLLAR, will send one ounce of

Packers' Pride Tomato Seed

to any address in the United States, post paid.

Address

JOHN J. WILLIS & CO.
mar-1t Mt. Holly, N. J.

NEW BLACKBERRY.
HOOSAC THORNLESS.

No Thorns to Scratch; 8 years under cultivation; **Hardy**; never has winter-killed; **quality, the best; in productiveness, unequalled.** Prepaid by mail, $1.00 each; 2 plants, $1.50; 6 plants, $3.00; 12 plants, $5.00. For full history of berry and plate, with testimonials, address *at once*

FRANK FORD, Ravenna, O.
Agents wanted everywhere; liberal inducements. 1t

Light Brahmas,
Dark Brahmas,
Buff Cochins,
W. F. Black Spanish,
White Leghorns,

W. A. MYERS,
New Oxford, Adams County, Pa.

Eggs, $3 per doz.

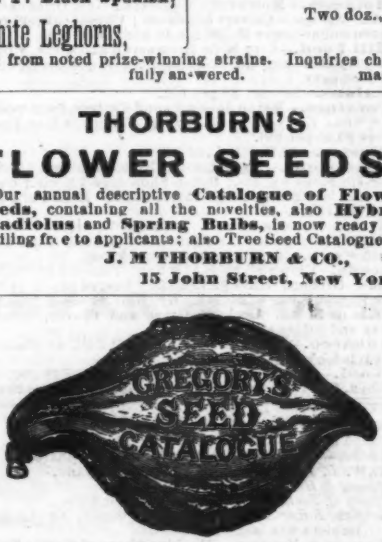
Two doz., $5.

All from noted prize-winning strains. Inquiries cheerfully answered. mar-1t

THORBURN'S
FLOWER SEEDS.

Our annual descriptive **Catalogue of Flower Seeds**, containing all the novelties, also **Hybrid Gladiolus** and **Spring Bulbs**, is now ready for mailing free to applicants; also Tree Seed Catalogue.

J. M THORBURN & CO.,
1t **15 John Street, New York.**



My business is to supply what every farmer of experience is most anxious to get, *perfectly reliable* Vegetable and Flower Seed. With this object in view, besides importing many varieties from reliable growers in France, England and Germany, I grow a hundred and fifty kinds of vegetable seed on my four seed farms, right under my own eye. Around all of these I throw the protection of the three warrants of my Catalogue. *Of new vegetables I make a specialty*, having been the first to introduce the Hubbard and Marblehead Squashes, the Marblehead Cabbages, and a score of others. My Catalogue containing numerous fine engravings, taken from photographs, sent *free* to all.

Jan-4t JAMES J. H. GREGORY, Marblehead, Mass.

Established 1856.

LARMOUR & CO.

DEALERS IN

GOLD AND SILVER WATCHES,

RICH JEWELRY, SOLID SILVER WARE,

TRIPLE-PLATED WARE, CLOCKS, BRONZES, &c.

Agents for the American Watch Co. of Waltham.

In our stock can be found WATCHES from the most celebrated makers of EUROPE as well as from the widely known AMERICAN factories; JEWELRY of every description, in

DIAMONDS, PEARLS, CAMEOS, &C.

SOLID SILVER WARE *of chastest styles, suitable for Wedding Presents and for Prizes for Agricultural and Horticultural Societies;* **SILVER PLATED WARE** *of the best manufacture;* **Fine Table Cutlery, &c.**

Also Agents for the celebrated "DIAMOND" SPECTACLES and EYE-GLASSES, the most perfect in the world.

(*Sign of the Big Clock.*) LARMOUR & CO.

195 West Baltimore Street, Baltimore, Md.

☞ **WATCHES and JEWELRY repaired in the best manner and warranted.** may-1y

We will purchase and have carefully shipped, by whatever mode of transportation may be designated:

FERTILIZERS of every description sold in this market—and there is, probably, no other city in the Union which offers better facilities for this purpose. We will buy, and deliver from the Peruvian Agent's Warehouses, whenever the order is sufficiently large to warrant it,

PERUVIAN GUANO.

Also the various **PHOSPHATIC GUANOS** imported into this port; **BONE DUST** from the best manufactures of this vicinity or the cheaper kinds from a distance, as may be ordered by the purchaser;

Land Plaster, Oil Vitriol, and all Chemicals Required

In the manufacture of **HOME MANURES** or **SUPERPHOSPHATES**, from the most reliable factories.

FRUIT and **ORNAMENTAL TREES, SHRUBBERY**, Field, Garden and Flower **SEEDS.**

All kinds of **AGRICULTURAL IMPLEMENTS** and **MACHINERY** at manufacturers' prices. Likewise,

Cattle, Horses, Sheep, Pigs, Poultry, &c.

Of the improved breeds. In this vicinity, in some particular kinds of stock, a better selection can be made than elsewhere, and special attention will be given to buying and forwarding such animals as may be ordered.

TERMS CASH (or its equivalent.)

Sam'l Sands & Son,

No. 9 North St., near Baltimore St., Baltimore, Md.

THE NEW LIGHT-RUNNING

"HOWE"

SEWING MACHINE

HAS JUST BEEN AWARDED THE

HIGHEST PREMIUM!

AT THE

Vienna Exposition,

FOR ITS SUPERIOR SEWING & STITCHING!

GENERAL OFFICE FOR THE STATES OF

Maryland, Virginia, N. Carolina, S. Carolina:

38 N. Charles St.

BALTIMORE, MARYLAND.

AGENTS WANTED in every County of the above States.

Liberal inducements and large pay to energetic men.

Wagons furnished and no Capital required.

Machines Sold on Easy Terms.

sep-1y